FAST Artist

USER'S MANUAL

FASTARTIST VERSION 2.0

FOR WINDOWS

MANUAL VERSION 1.1 - REVISED FEBRUARY, 2009

GRAPHiC SOFTWARE

Basic Safety Instructions

Please read this entire Manual as well as your print's User's Manual before attempting to Print.

- Follow all warnings on and about your printer.
- Use the proper power source type indicated on the printer's label and in its User's Manual.
- Connect all equipment to grounded outlets. Do not use the same outlet for any other system, such as a copy machine, an air conditioning unit or a Heat Press that may cycle ON and OFF.
- Place the printer where the power outlet is easily seen.
- Do not allow the power cord to become damaged.
- If you are using an extension cord, ensure the extension cord's power ampere rate meets or exceeds that of the printer's cord.
- Keep electromagnetic devices and other potential sources of magnetic fields away from your printer and computer hard drive(s).
- Do not use the printer in locations that may experience high humidity, shocks, vibrations, debris or dust.
- Leave enough space around the printer for proper ventilation.
- Do not leave your printer near heat sources such as radiators or heat vents.
- Do not leave the printer in direct sunlight.
- Place the printer on a stable surface that extends beyond the length and width of the printer supports. The printer will not work properly if it is tilted or leaning.
- When packing and moving the printer, do not set the printer on its side or upside down. This may cause the ink to spill.
- Turn the printer OFF before cleaning. Clean with a damp cloth and avoid spilling any liquid on the printer.

Caution:

- Do not unplug the printer to turn it OFF. Follow the proper shutdown procedures by using the power button and breaker.
- Do not unplug the printer until the Main Power Switch has been turned OFF.
- Do not block any of the printer's vents or insert foreign object into its slots.
- Do not attempt to service the printer yourself beyond the troubleshooting techniques covered in this or your printer's User Manual.
- Do not attempt to modify any software or device settings not covered in this Manual
- Keep the printer on a level surface.

Safety Instructions for Ink Cartridges:

- Always keep ink cartridges out of the reach of children.
- While handling ink, be careful not to spill it on your skin. If ink does get on your skin, wash thoroughly with soap and water. If ink gets in your eyes, flush them immediately with water.
- Do not put your hand in the printer or touch the ink cartridges while the printer is in operation.
- Do not move the Print Head by hand; doing so may damage the printer.
- If you remove the ink cartridges, make sure to place them in individual bags and keep them away from dust, dirt and debris.
- Store unused ink cartridges in a cool dark place.
- Allow ink cartridges to warm to room temperature before using them after storage.
- Do not dismantle the ink cartridge.
- Do not touch the IC chip on the ink cartridges. This will adversely effect normal printing operations.

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Chapter 1

Introduction

About FastARTIST 2.0

Welcome to FastARTIST 2.0. Our software development has come a long way, with the 2.0 release. With several updated and added features as well as tool additions, FastARTIST 2.0 will make printing to your T-Jet inkjet-to-garment printer much easier and more enjoyable than ever before. Some of the new features include: PSD plug-ins for completing special Bitmap transformations, PDF Color Proofing, a Vectorization Wizard, the amazing Fluid Mask and Super Size filters and much more.

About FastRIP 10.0

FastARTIST works in conjunction with FastRIP 10.0 to help make the best prints, fast. FastRIP tells your printer what to do and how much ink to lay down. The new 10.0 has also been updated with several features that will make printing a snap. In fact, you can drag your artwork directly to the RIP Queue for printing directly from FastRIP. The update also offers a Multi-Queue Manager, Template Mode, a Costing Interface and much more. For details on FastRIP related topics, please refer to your FastRIP 10.0 User's Manual.

Legend of Manual Symbols

Throughout this Manual you will see four symbols used to notify you of important facts or procedures. Pay close attention to these symbols or you may pay with trial and error later.

Where you see this icon, you should take note of the warnings. Failure to follow any of the listed procedures could result in severe trial and error in your software, damage to your printer or computer, large amounts of downtime and/or costly repairs, even the possibility of severe bodily injury or death.

This icon is used to denote important notes or points that may affect the proper operation of FastARTIST along with the printer and the viability of its output. Think of this as MORE than just a helpful hint.

This icon indicates recommendations or special notes from U.S. Screen based on research and development or years of experience within the Garment Decorating business. Following these helpful Hints will make printing with FastARTIST more enjoyable.

The arrow indicates the focal point of photos or illustrations throughout this manual. If you are in doubt about what the photo is talking about, refer to the arrow.

Chapter 2

Installation and Getting Started

Welcome to FastARTIST

This version of FastARTIST includes this Manual, an installation CD, a CD with clip art and fonts, a training CD, a training DVD and a software dongle. FastARTIST 2.0 will work with any T-Jet Inkjet-to-Garment printer.

FastARTIST is a customized version of a sign and vinyl cutting program called SignLAB. Some routines and features that are not applicable to Inkjet-to-Garment printing have been removed, however this is still a very powerful program that can be used as a standalone graphics application comparable to Adobe Photoshop or CorelDRAW.

The purpose of this Manual is to familiarize you with this program, as well as get you started printing to garments as quickly as possible. It is not intended to be a comprehensive guide. If you wish to utilize any of the application's advanced features, the complete SignLAB 7.1 Help Section is accessible via a drop-down menu within the FastARTIST program.

NOTE: It is extremely important that you read the entire User's Manual that came with your Fast T-Jet printer BEFORE you begin printing. That Manual contains specific details about your printer that are necessary for trouble free operation.

System Resources and Requirements

The speed and configuration of your PC will have a significant effect on the performance of the FastARTIST program.

Windows XP System Requirements

- A Pentium IV 1.8 GHz PC with Windows XP, 2000 or Vista Operating System. This application is not compatible with Windows ME.
- At least 1 GB RAM (2 GB of RAM for the best performance.)
- 10 GB of free hard drive space for the program files with an additional 50 GB needed for saved images, artwork, fonts and clip art
- A free USB port for the Dongle (A total of three USB ports may be required to accommodate the Dongle, a mouse and a printer connection).
- USB 7.0 high-speed for printing port

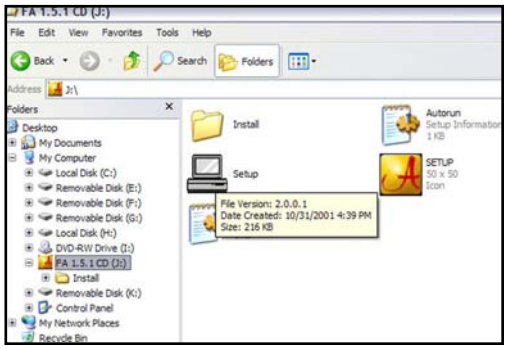
Windows Vista System Requirements

- A Pentium IV 1.8 GHz PC with Windows XP, 2000 or Vista Operating System. This application is not compatible with Windows ME.
- At least 2 GB RAM (3 GB of RAM for the best performance.)
- 10 GB of free hard drive space for the program files with an additional 50 GB needed for saved images, artwork, fonts and clip art
- A free USB port for the Dongle (A total of three USB ports may be required to accommodate the Dongle, a mouse and a printer connection).
- USB 7.0 high-speed for printing port

Installing FastARTIST/FastRIP 10.0

Installation of the CD-ROM

Insert the FastARTIST CD into your CD drive. Most Windows configurations will automatically launch the setup program, however, if this is not the case, *double-click* on your desktop *My Computer* icon and locate the drive containing the installation CD. *Right-click* on the driver and select *Explore*. *Double-click* on the *Setup* icon to launch the Installer.



Note: Due to software upgrades and changes, your installation menus may not look exactly like the following images.

IMPORTANT POINTS

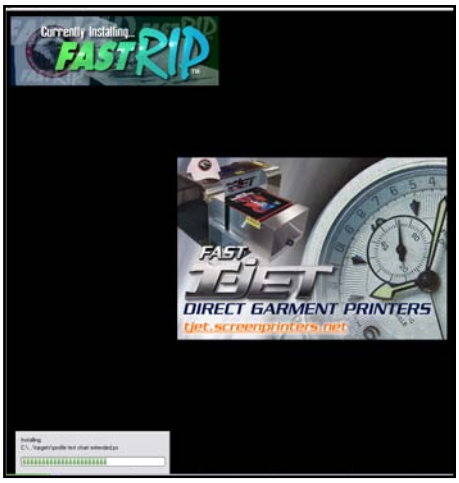
Always close any applications that are running before starting the installation. DO NOT insert the Dongle until AFTER FastARTIST has been installed. All anti-virus and spyware programs should be turned off during the installation

You will be prompted for what language you wish the installation to use. Although FastARTIST menus and operations are ONLY in English, you may choose another language for installation prompts. The next screen will welcome you to the FastARTIST installation. Click on *Next*.

1. You will be prompted to approve the license agreement. Check *Accept* and click on *Next*.

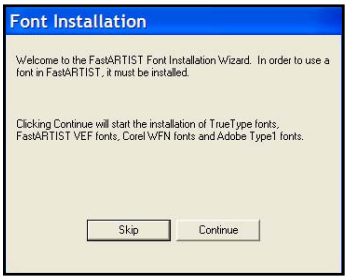
2. You will be asked to choose an Installation Directory. Advanced Windows Users may wish to change the destination. For most Users, the default destination is the best choice. Click on *Next*.

3. You will be prompted to approve the Program Folder. Advanced Windows Users may wish to change the folder name. For most Users, the default name is the best choice. Click on *Next*.



4. This screen will appear while FastRIP is being installed.

5. You will be asked if you wish to install the Fonts. Click on *Continue* to *Install* all the fonts that came with FastARTIST. You may be prompted to insert the Fonts CD. If the system does not find the fonts, you can copy the Fonts folder from the CD into your FastARTIST directory and install them later.

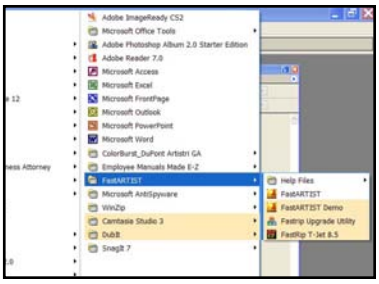

Font Installation
Welcome to the FastARTIST Font Installation Wizard. In order to use a font in FastARTIST, it must be installed.
Clicking Continue will start the installation of TrueType fonts, FastARTIST VEF fonts, Corel WFN fonts and Adobe Type1 fonts.
Skip
Continue

6. You will then be asked if you wish to *Install* the available clip art. This can take a long time and uses a fair amount of hard disk space. If you have the time and a large hard drive, go ahead and *Install* them.

7. When the installation is complete, check "Yes, I want to restart my computer now" and click on *Finish*.

8. After your computer reboots, you should see a FastARTIST icon on your desktop.

If you do not have an icon and you wish to place one on your desktop, go to *Start* > *Programs* and locate the FastARTIST program folder. Mouse over the folder to expand contents and you will see two FastARTIST listings- one will have a version number after it, the other will have "Demo". *Right-click* on the icon with the version number and select *Send To* > *Desktop*.



NOTE: Any time you wish to launch FastARTIST, double-click on the desktop icon.

Dongle Installation

A Software Dongle is included with the FastARTIST package. The Dongle looks very similar to a "Flash Drive" and plugs into any free USB port on your computer. The Dongle acts as a hardware protection key. Much like your car keys allow you to start your car, the Dongle allows you to use FastARTIST and FastRIP. It is important you do not connect your Dongle to your computer until ***AFTER*** FastARTIST has been installed. Otherwise, there is a risk that Windows will label the Dongle as an "unknown USB device."

IMPORTANT POINT

DO NOT LOSE OR DAMAGE the Dongle. *Without the Dongle, your software will not function. Should you lose your Dongle, you will be required to* **PURCHASE** *a replacement from U.S. Screen.* ***DO NOT*** *insert your Dongle into your computer until instructed to do so by this Manual.*

Plug your Dongle into an available USB port. The computer should automatically recognize the dongle. If your computer for any reason, does not recognize the dongle, follow the next section, ***Dongle Error***.

Dongle Error

If you receive a Windows error balloon stating, "Unknown USB device" or if the computer isn't recognizing the dongle, follow these steps.

Go to *Start* > *Settings* > *Control Panel* and *double-click* on it to open a new window.

1. Within the Control Panel window, locate and *double-click* on the System icon. Click on the Hardware tab. Click the Device Manager button. You will see displayed all of the hardware that is currently connected to your computer.

2. Within the Device Manager window, locate the USB device that is identified as an unknown device (this is your Dongle) and choose *Uninstall*.

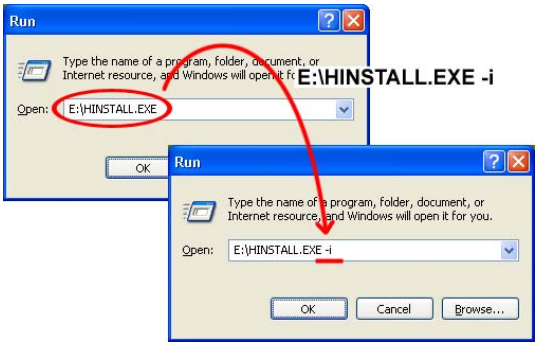
3. Exit the Device Manager and close System window.

4. Unplug the Dongle from your computer.

5. Place the FastARTIST installation CD in your CD drive. If prompted to choose a language, click *Cancel*.

6. Go to *Start* > *Run*. Within the Run dialogue, click *Browse* and locate the file called "HINSTALL.EXE" on the installation CD. *Double-click* on it to select.

7. "HINSTALL.EXE" will now be displayed in the Run dialogue field. Click within the field and type " -i" (space-hypen-lowercase letter "i") immediately after the filename.



8. Click OK and the Dongle driver will be reinstalled. After the installation is complete, restart your computer.

9. When your computer has rebooted, connect the Dongle to any available USB port. It should be properly recognized and associated with FastARTIST as a device. If you are still encountering problems, please contact Technical Support.

Support Information

Toll Free	+1 888-MYTJETS (698-5387)
Technical Support	+1 480-929-2937
Corporate Office	+1 480-929-0640
Fax	+1 480-929-0766
E-mail	support@usscreen.com
Internet	www.screenprinters.net Click on the *Support* tab.
Support hours	7:00am to 6:00pm Monday through Friday

After hours Emergency Support is available

All times listed are Mountain Standard Time USA
Note: Arizona does not observe “Daylight Savings Time.”

For more information on support, refer to the product support chapter of this manual.

Dongle Warranty

If failure of the hardware (Dongle) has resulted from accident, abuse or misapplication, U.S. Screen shall have no responsibility to replace the hardware. Replacement will be warranted for the remainder of the original warranty period or 1 year, whichever is longer. If the Dongle ceases to operate within the 1 year warranty period, it will be replaced at no charge AFTER it has been returned to the U.S. Screen & Inkjet Technology. You must insure the Dongle for at least $750 against loss or damage during mailing. If the Dongle is not under warranty, a replacement Dongle may be purchased. Contact U.S. Screen for pricing or for details on purchasing or returning a defective Dongle. All returns must be shipped by a traceable carrier and have a return authorization number on the box provided by U.S. Screen Print & Inkjet Technology.

Installing and Configuring FastRIP

FastRIP is the heart of the printing process, performing the task of a Raster Image Processor (RIP), controlling how much ink is laid down, how many passes are made by the Print Head and how White ink is printed. FastRIP also manages the memory needed for raster images and the spooling of multiple jobs to the printer by utilizing Virtual Memory (VM) disk processing.

FastRIP does most of this with PostScript. PostScript is an industry-standard scripting language used to communicate the text and graphic elements of a job from a computer to a printer . When FastRIP processes a job, these PostScript elements are used to generate a raster image (a series of horizontal lines) that the printer is capable of rendering. The printer will then output your image one raster (line) at a time.

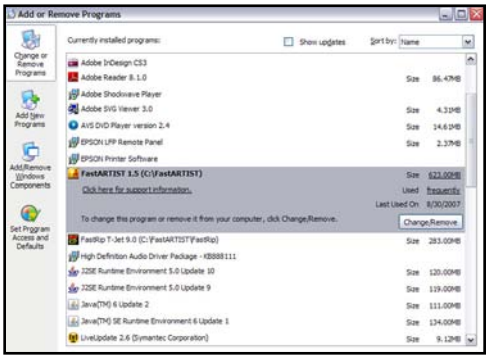
When the FastARTIST installation is complete, it can be launched by *double-clicking* on its icon. However, you will not be able to PRINT an image using your Fast T-Jet until FastRIP has been configured.

INSTALL FASTARTIST, THEN INSTALL FASTRIP.

REFER TO YOUR FASTRIP 10.0 USERS MANUAL FOR INSTALLATION AND SETUP INSTRUCTIONS FOR FASTRIP.

Unistalling FastARTIST

In the event that FastARTIST is not operating correctly or you are asked to uninstall it, move any artwork you have stored in the FastARTIST root directory into a separate folder prior to running an uninstall. Select *Add/Remove* programs from the Control Panel (*Start* > *Settings* > *Control Panel*) and highlight FastARTIST. Select *Change*/*Remove*.



Repeat this process to remove FastRIP. ***You MUST remove BOTH FastARTIST and FastRIP or the reinstallation can cause serious system errors.***

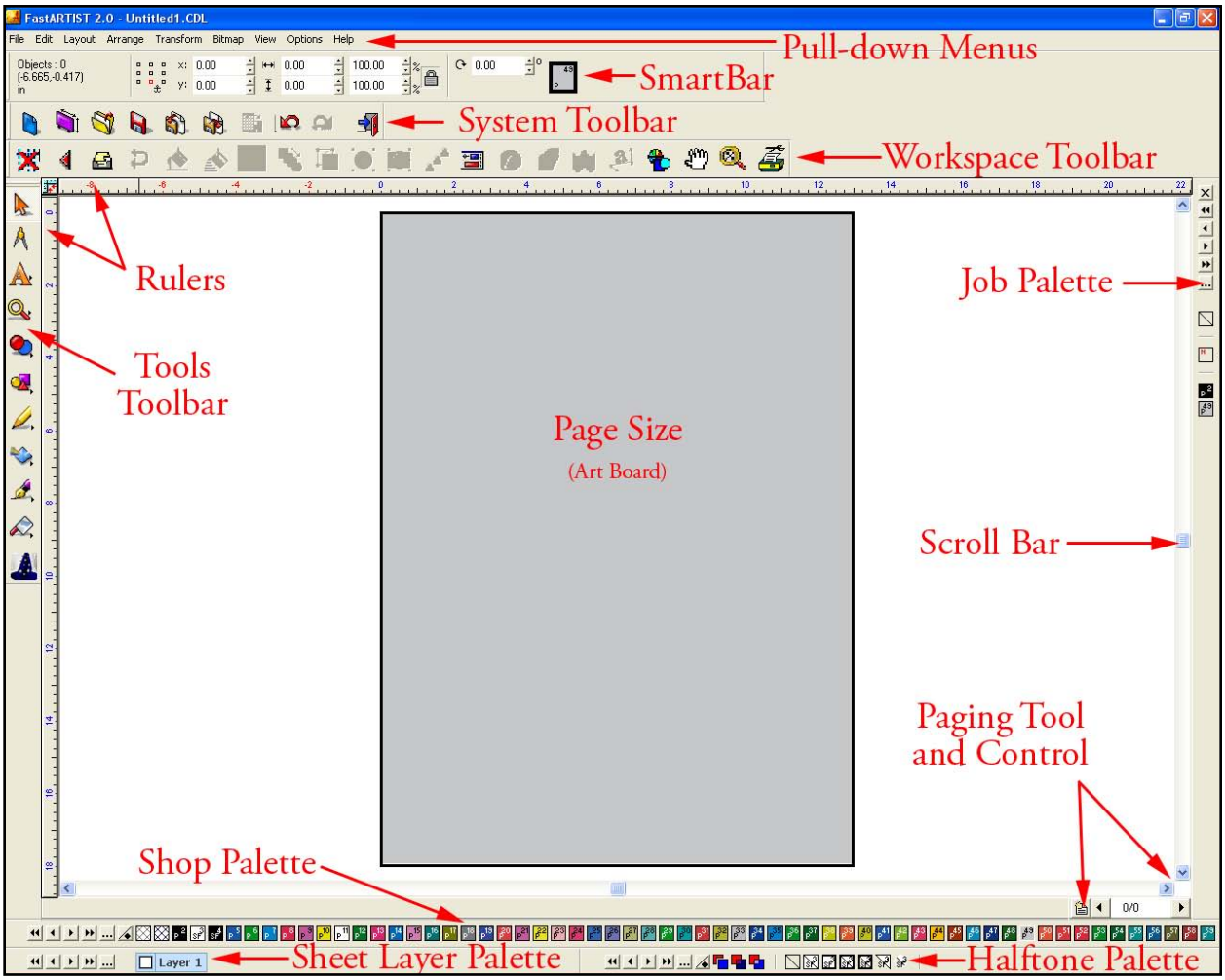
After removing both FastARTIST and FastRIP, locate the FastARTIST folder on your hard drive and delete it. Empty your Recycling Bin and begin the reinstallation process as directed.

Chapter 3

FastARTIST Tools and Workspace

Workspace Elements

The FastARTIST Workspace is a visual representation of a *Page* in which you can compose and/or manipulate an image for output. Surrounding the *Page* are numerous Toolbars to assist in creating and modifying text and images. The dimensions of the *Page Size* are determined by the printable area of your Fast T-Jet (consult your printer's User's Manual for more details), but what you can create using this powerful software is limited only by your imagination.



The basic display of Workspace Objects may be modified by accessing the *View* menu. The functions available from this *dropdown* are summarized in the following table:

Show Page Size	Toggles ON/OFF an outline that visually represents the Page Size.
Show Substrate	Set the Page Size color according to the substrate color, as indicated by the currently selected Sheet Layer Plate. When the Show Substrate option becomes disabled, the Page Color will be reset to White.
Show Fill	Toggles ON/OFF the use of wireframes to improve screen refresh time.
Show Bitmap Outlines	Toggles ON/OFF outlines in place of bitmaps to improve screen refresh time.
Link Show Fill and Bitmap Outlines	When Show Fill is toggled, this causes wireframes to be shown instead of the bitmap image.
Show Line Style	Toggles ON/OFF the display of line styles for Workspace Objects.
Show Overprint and Overlap	Toggles ON/OFF the display of crosshatch and diagonal patterns used to indicate a shape that will be printed with the Overprint or Overlap property.
Show Rulers	Toggles ON/OFF the display of the Workspace rulers.
Show Bitmaps Only	Hides all Objects that are not bitmaps.
Show Reduced Bitmaps	For display purposes only- reduces the color depth and resolution of bitmaps. This will improve the screen refresh time.
Show Grid	Toggles ON/OFF the display of grid lines.
Show Guide Labels	Toggles ON/OFF the display of guideline labels.
Palettes	Allows the User to choose which color palettes are visible.
Toolbars	Allows the User to choose which custom toolbars are visible.
Show Instant Replay	Displays the Instant Replay window.
Show Storage Bin	Displays the Storage Bin window.

Multiple Document Windows

To have more than one design window open at the same time, enable *Multiple Instance* under the *Options* Pull-down menu. To create additional windows, you would use the *File* > *New* command. To manage these windows, there will be two additional commands under the *File* menu:

- Close – Closes the current design window (You will be prompted to *Save* your work.)
- Close All – Closes all open design windows

Having extra FastARTIST windows allows for components of a design to be edited separately and then combined. To move a selected Object between windows, use the *Copy* and *Paste* commands. You may also *drag-and-drop* Objects between windows.

Workspace Colors

This will customize the basic appearance of the Workspace. For access, select, from the Pull-down Menu, *Options* > *Workspace Colors*:

- Background Color refers to the area around the *Page*.
- Grid Color refers to the grid lines in the Workspace.
- Guideline Color refers to the guides.
- Page Color refers to the edge of the *Page*.

The color of the *Page* is set within the *Current Selection* attributes found in the *Layout* > *Page Size* dialogue.

Refresh Screen

To refresh the Workspace, select *Edit* > *Redraw,* from the Pull-down Menu.

Origin Selection

Origin Selection is used to indicate the zero-zero (0, 0) position of the *Page*. By default, this position is set to the **top left corner**.

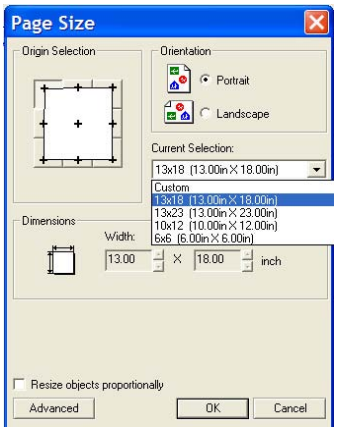
Orientation

Orientation refers to the rotation of the *Page*. This setting is independent of *Page Orientation*, which is used when printing.

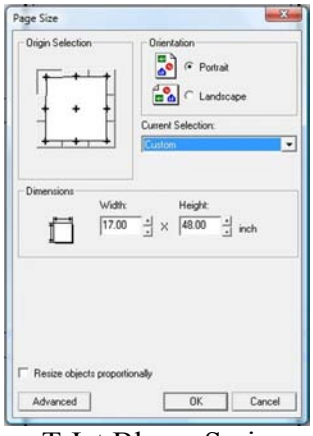
Page Size

Page Size is a visual representation of the area that is available for placement of a printable image. This allows for the spatial arrangement of Workspace Objects to be verified prior to sending a job to FastRIP. *Page Size* is normally selected by using a template specifically designed for your Fast T-Jet printer, but you may customize this as long as you don't exceed the maximum printable dimensions of your machine. (Consult your printer's User's Manual for details.)

The *Page Size* dialogue is accessed by choosing *Layout* > *Page Size*.



T-Jet 3



T-Jet Blazer Series

Current Selection

The *Current Selection Drop-down* Menu is used to choose the dimensions (width by height) of the *Page Size*. If *Custom Size* is chosen, then the Width and Height fields must be manually entered.

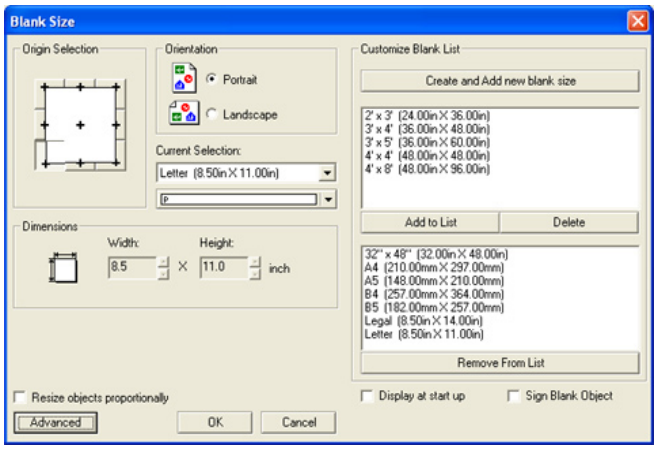
IMPORTANT NOTE

FastARTIST refers to its Page dimensions in terms of "Width" and "Height." For purposes of printing a two-dimensional image on a garment or non-textile item, it is important to be aware of the fact that "height" means the same thing as "length."

Dimensions

The *Dimensions* section of the *Page Size* dialogue displays the current dimensions of the *Page*. If the *Landscape* option is enabled, the image's orientation will be rotated 90° clockwise.

Advanced Settings



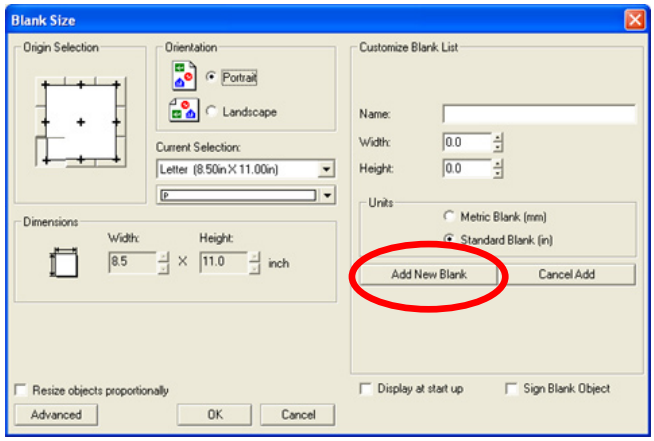
Click on the *Advanced* button to toggle ON/OFF the display of the *Advanced Blank Size Controls.*

(***Note**: Blank* and *Page* are synonymous within this application).

These controls are used to create a new *Page Size* (*Blank*) that can be added to the *Current Selection* list.

The *Advanced Controls* window contains two lists of *Page Size*s. The top list contains *Page Size*s that have yet to be added to the *Current Selection Drop-dow*n Menu . The bottom list contains *Page Size*s that are already available from the *Current Selection Drop-dow*n Menu .

Create and Add a New Blank



If the *Create and Add new blank size* button is pressed, the Advanced Blank Size Controls will be temporarily replaced with controls for entering a new *Page Size*.

After entering the Name, Width, Height and Units for the new *Blank*, click on the *Add New Blank* button. The new *Page Size* will be added to the list of available *Page Sizes*.

Add to List

For a selected *Page Size* in the top list, click on the *Add to List* button to add it to the *Current Selection drop-down* menu.

Delete

For a selected *Page Size* in the top list, click on the *Delete* button to remove it completely.

Remove From List

To remove a *Page Size* from the *Current Selection Drop-dow*n Menu , highlight it in the bottom list and click on the *Remove From List* button. The *Page Size* will remain in the top list to be selected at a later time.

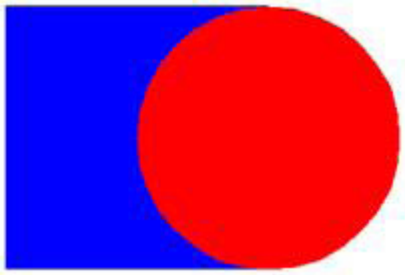
Display at Start Up

If the *Display at start up* option is enabled, the *Page Size* dialogue will open when a new Workspace is created.

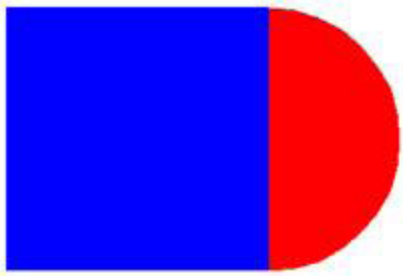
Order of Workspace Objects

Objects are usually edited in terms of their width and height, however Workspace Objects also have a layering order that determines which Objects appear on top of other Objects. The order of individual Objects may be modified using the following commands from the *Arrange > Order* menu.

To Front	[Ctrl + F]	Position the selected Object before all other Objects
To Back	[Ctrl + B]	Position the selected Object behind all other Objects
Forward	[Ctrl + U]	Increase the relative position of the Object
Backward	[Ctrl + L]	Decrease the relative position of the Object
Reverse	[Ctrl + M]	Invert the relative order for a group of selected Objects



Circle has a **higher** layer order than the square



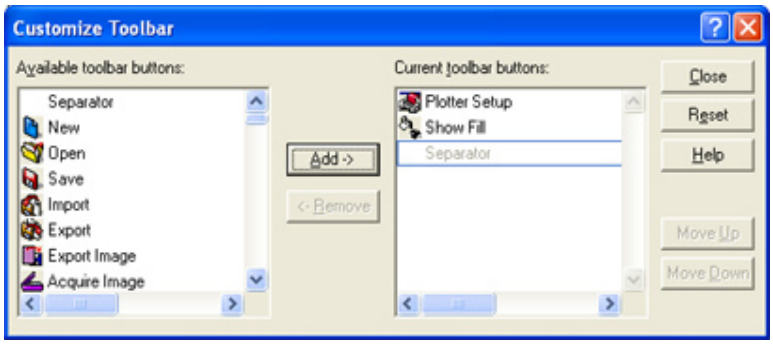
Circle has a **lower** layer order than the square

Toolbars

There are four toolbars available in FastARTIST- *System, Operation, Workspace and Tools*.

- To toggle a toolbar ON or OFF, select *View > Toolbars*.
- To customize the toolbars, select *View > Toolbars > Customize*.
- Toolbars may also be customized by *right-clicking* on them.

Custom Toolbars



The *System, Workspace and Tools* toolbars are available by default. The additional toolbar, *Operation*, may be toggled ON from the *View* menu.

Should you wish to create a new Toolbar, you would use the *Customize Toolbar* dialogue to *Add*, *Remove* or rearrange the available commands.

The *Customize Toolbar* controls available are:

Available Toolbar Buttons — This list displays the buttons that are not currently on the *Customizable Tool Palette*. To add a button to the palette, first select the button from this list, and then click on the *Add* button.

Add — To add a button to the Customizable Tool Palette, select a button from the Available toolbar buttons list, and then click on the *Add* button.

Current Toolbar Buttons — This list displays the buttons that are currently on the Customizable Tool Palette. To remove a button from this list, first select the button from this list, and then click on the *Remove* button.

Remove — To remove a button from the *Customizable Tool Palette*, select a button from the Current toolbar buttons list, and then click on the *Remove* button.

Close — Click on the *Close* button to exit the *Customize Toolbar* dialogue.

Reset — The *Reset* button returns the *Customizable Tool Palette* to the settings that were in effect when the *Customize Toolbar* dialogue was opened.

Help — Press the *Help* button to access the On-line Help.

Move Up — To increase the priority of a button, first select that button in the Current toolbar buttons list, and then click on the *Move Up* button.

Move Down — To decrease the priority of a button, first select that button in the Current toolbar buttons list, and then click on the *Move Down* button.

System Toolbar

The System toolbar includes the tools for file operations. To toggle the toolbar ON/OFF, select *View* > *Toolbars*.

	New	Open a new Workspace
	Blank Size	Opens the *Blank Size* dialogue where you can change the dimensions and orientation of the *Page*
	Open	Open a previously stored selection of operations
	Save	To save operations for later use, select the desired operations and click on *Save File*.
	Import	Import a file into the Workspace
	Export	Exports the Workspace, allowing you to save it in a variety of file formats
	Undo	Reverse the previous operation. When node editing, only five levels of *Undo* are permitted.
	Redo	Reverse the previously performed *Undo* operation
	Close Window	Closes the current FastARTIST window
	Exit	Exit FastARTIST.

Workspace Toolbar

	Remove All Guides
	Instant Replay
	Show Storage Bin

Simplify

Gradient Fills

Multi-Spot Gradient Fills

Pattern Fills

Metamorphosis

Render to Bitmap

Clipping

Clipping Clear

Contour Cut

Array

Alignment

Outline

Shadows

Transformation

Fit Text to Path

Sort Colors - By All Objects

Pan State

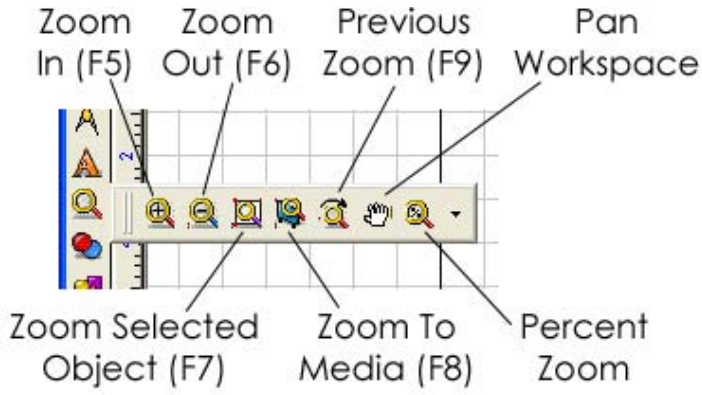
Percent Zoom

Print and Cut

Tools Toolbar

	Select	The Select tool is used to select Objects.
	Measure	Measure tools are used to label Workspace dimensions, and to place notes about Workspace Objects.
	Text	Text tools are used for creating text on the Workspace.
	Zoom	Zoom tools are used to zoom in and out to view the Page.
	Weld	Weld tools are used to bond overlapping shapes into a combined Object.
	Shape	Basic shapes are available from the Shapes toolbar.
	Graphics Edit	The Graphics Edit tools are available for node, free, and arc editing.
	Scan	The Scan tools include FastScan, Photo Machine, and Center Line Tracing.
	Stroke and Fill	Line Style, Gradient and Pattern Fills are available from the Stroke and Fill toolbar
	Ginsu Knife	Open and Close Path tools are available from the Ginsu Knife toolbar.

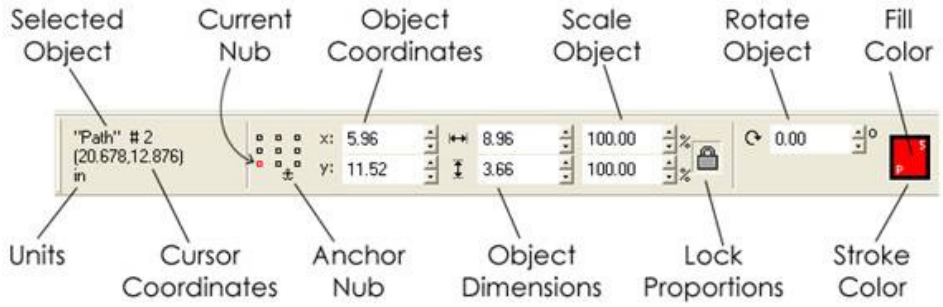
Zoom Tools



The zoom functions:

	Zoom In	[F5]	Focus on marquee drawn by cursor. *Right-click* on to zoom out.
	Zoom Out	[F6]	Display more area of the Workspace.
	Zoom to Selected Object	[F7]	Fit the viewing area to the selected Objects. If no Objects are selected, then fit to all Objects.
	Zoom to Blank Size	[F8]	Fit the viewing area to the *Page*.
	Zoom to Previous View	[F9]	Toggle between the current and previous zoom levels.
	Pan Workspace	[Middle Button]	Click-and-hold on Workspace, then drag view.
	Percent Zoom	[Mouse Wheel]	View Workspace at a specific zoom level.

SmartBar Controls



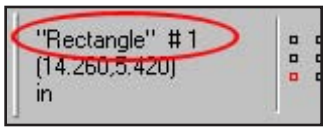
The SmartBar is a special toolbar in FastARTIST that provides context-sensitive controls according to the type of operation that is being performed. When a shape is selected, the SmartBar displays information such the Object's *Size* and *Position*.

IMPORTANT NOTE

If you un-dock or close the SmartBar, there is no button to push to "find" or restore the SmartBar. If you do not have a SmartBar, please call Technical Support for help with restoring it.

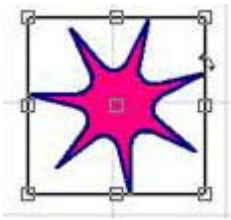
Objects Selected

The Object type is listed at the far-left of the SmartBar. The number after the Object type indicates the database order of the Object. When pressing [TAB] to advance between different Objects, the [TAB] order is the same as the database order.

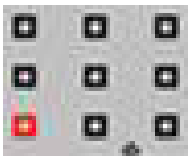


Current Nub

Selecting an Object will reveal its bounding-box, which are nine square nubs used for moving, scaling and re-sizing. Within the SmartBar, the anchor controls indicate the current nub. When the SmartBar is used to move or re-size an Object, the current nub is used as the reference point. For example, clicking the lower-left nub in the SmartBar will indicate that Object should be re-sized with respect to its lower-left bounding box.



Selected object



Anchor controls

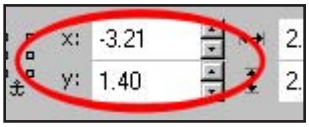
If the anchor nub is clicked in the SmartBar, then a small, "anchor" icon will appear within the bounding box. To use the anchor nub, position the anchor over a specific part of the shape and type new X and Y coordinates in the SmartBar. The anchor will be moved to the new coordinates and the Object will be moved with the anchor.

X & Y Coordinates of Mouse/Cursor

Below the *Objects Selected* field, the X and Y coordinates of the cursor are displayed, as well as the current units of measurement that are being used on the Workspace.

Object Coordinates

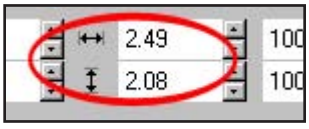
The X and Y fields display the coordinates of the selected Object. These coordinates may be changed by dragging the Object with the mouse or by entering a new value in one of the fields. After entering new data in a field, press the [Enter] key to confirm the new coordinates.



Object Width and Height

The *Width* and *Height* fields display the size of the selected Object.

These dimensions may be changed by re-sizing the Object with the mouse or by entering a new value in one of the fields. After entering new data in a field, press the [Enter] key to confirm the new values.



Object Scale

The *Object Scale* fields are used to re-size the Object as a percentage of its original dimensions.

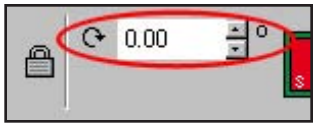
The *Object Scale* arrows will re-size the Object in 5% increments or you may the values by manually entering data into one or both fields. After entering new data in a field(s), press the [Enter] key to confirm the new values.

Aspect Ratio

When an Object is either re-sized or scaled, the *Aspect Ratio* button may be maintained by activating this button.

Rotation

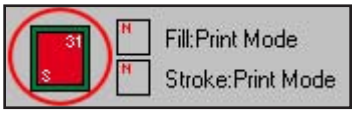
The *Rotation* field indicates to what degree the Object will be rotated.



Rotation Arrows will rotate the Object in 15 degree increments. Rotation may be manually changed by entering a new value in the field. After entering new data in a field, press the [Enter] key to confirm the new value.

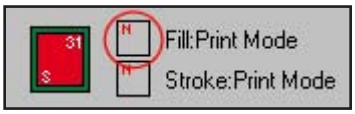
Object Color

The *Fill* and *Stroke* color for the selected Object is displayed at the far right of the SmartBar . If no Object is currently selected, then the default *Fill* and *Stroke* colors are displayed.



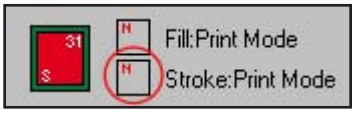
Fill Primer

The *Fill Primer* indicates which *Primer* color has been applied to the Object *Fill*. If no Object is currently selected, then the *Fill Primer* will not be displayed.



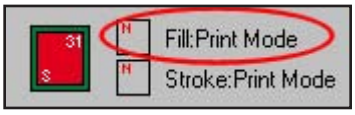
Stroke Primer

The *Stroke Primer* indicates the primer color that has been applied to the Object *Stroke*. If no Object is currently selected, then the *Stroke Primer* will not be displayed.



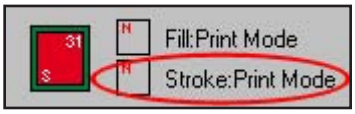
Fill Halftone

Fill Halftone indicates the halftone that has been applied to the Object *Fill* color. If no Object is currently selected, then *Fill Halftone* will not be displayed.



Stroke Halftone

Stroke Halftone indicates the halftone that has been applied to the Object *Stroke* color. If no Object is currently selected, then *Stroke Halftone* will not be displayed.



Scrolling and Panning

Scroll bars along the vertical edge and bottom of the screen enable viewing any portions of a graphic not currently in the window.

Vertical/Horizontal Scroll Bars

Vertical and *Horizontal Scroll Bars* are used to scroll through the current window to view another part of the image. This is very useful when viewing a graphic in zoom mode.

Scroll Bar Arrows

Clicking on an *Arrow* causes the viewing window to move in the direction indicated by that *Arrow*. This will have the appearance of moving the graphic in the opposite direction a short distance. This distance is approximately 1/10 the width or height of the view screen, depending on whether you are moving the screen vertically or horizontally.

Scroll Bar Elevators

Clicking on a *Scroll Elevato*r causes the viewing window to move in the appropriate direction a large distance. The distance moved is approximately equal to 1/3 the width or height of your view screen, depending on whether you are moving your view vertically or horizontally.

Scroll Bar Thumb

Dragging a *Scroll Bar Thumb* within the *Scroll Bar* causes the viewing window to move in the direction of the thumb in very large increments. How far the view screen actually moves depends on how far the thumb is moved within the *Scroll Bars*. When deciding how far to drag the *Scroll Thumb*, be aware that the ends of the *Scroll Bar* represent the outer edges of the file on screen.

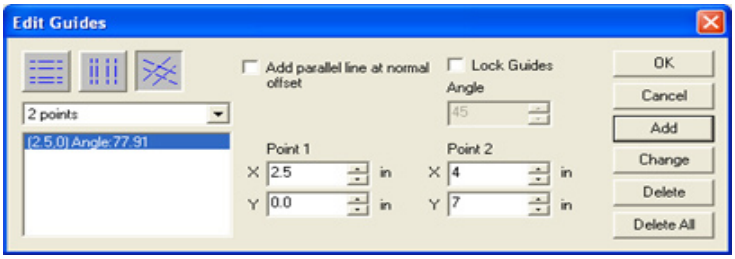
Guidelines

A guideline is a vertical or horizontal reference that is used for placing Objects. Objects will "snap" to a location when they pass over a guideline.

You may create and edit guidelines several different ways:

1. *Right-click* on a ruler to create a guide

2. To create guidelines for a selected Object, press [Shift] and *right-click* on the Object handles. (This will not work when editing a parametric shape.)



3. To add guides when Node editing, press [Shift] and *right-click* on the *Node*

4. Open the *Edit Guides* dialogue by *right-clicking* on the Workspace with no Objects selected

5. Open the *Edit Guides* dialogue by selecting *Options* > *Guides* > *Edit Guides*

6. When dragging the position of a guide, press [Shift] to constrain a guideline to the nearest ruler increment

7. To remove a guide, press [Shift] and *right-click* on the guide with no Objects selected

As an example, the following steps will create a guideline between two points:

1. *Right-click on* the Workspace to open the *Edit Guides* dialogue

2. Set the guideline orientation to diagonal and choose two points from the drop-down list

3. Set the coordinates for Point 1 and Point 2 and click on the *Add* button. The resulting guideline will pass through the indicated points

Note: As many as sixty guidelines in either direction may be displayed on the screen at one time.

Align Palette

Holding down the [Ctrl] key while *right-clicking* on the Workspace will display the *Align Palette*. This provides tools for aligning Objects with respect to any grid lines.

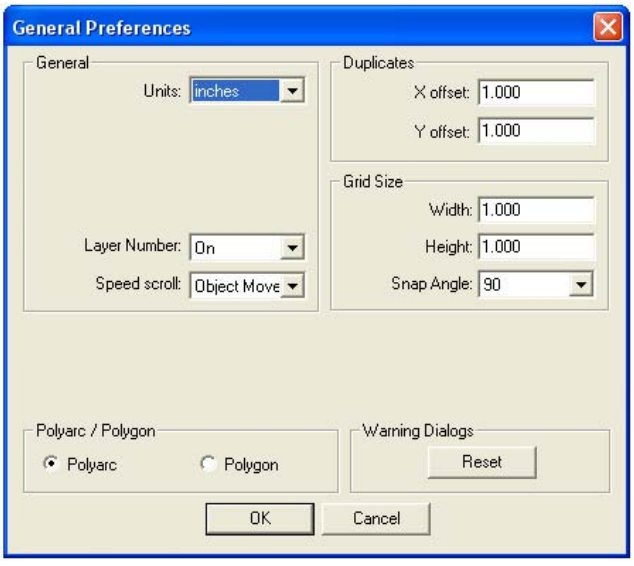
	Set Origin	Set the grid origin to the selected location.
	Resize grid	Resize the grid increments based on the distance between the selected location and the grid origin.
	Snap to Grid Intersection	Move the Object, such that the nub is at the nearest grid intersection.
	Snap Vertically	Move the Object, such that the nub is at the nearest horizontal grid line.
	Snap Horizontally	Move the Object, such that the nub is at the nearest vertical grid line.

To reset the Origin, choose *Reset Origin* under the *Options* menu.

Workspace Options

General Preferences

The *General Preferences* dialogue contains basic Workspace settings that are common to most features. To access this window, select from the Pull-down Menu, *Options* > *FastARTIST Setup* > *General Preferences*.



- **Units**
  Unless otherwise specified, the *Units* set in the General Preferences dialogue will be used throughout the FastARTIST Workspace and features. You may also change the *Units* used by clicking on the Workspace rulers.
- **Layer Number**
  The *Layer Number* toggles the display of *Color Plate* numbers.

- **Speed Scrolling**
  If *Speed Scrolling* is active, then dragging off the edges of the Workspace will cause the Workspace to scroll. There are three options for speed scrolling:

Off	Disable speed scrolling
Object Move	Only perform speed scrolling when dragging an Object.
Full	Perform speed scrolling when dragging an Object, or when dragging a marquee.

- **Duplicates**
  When using the *Duplicate* command, *Offsets* specified here will be applied to the placing of new Objects with respect to the original.

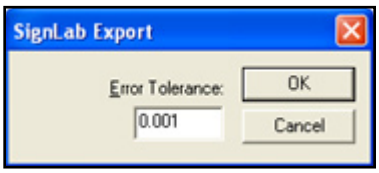
- **Grid Size**
  The grid dimensions are set in the *General Preferences* dialogue. The *Snap Angle* is used when [Ctrl] is held during certain operations, such as when editing line segments and corners.

- **Polyarc/Polygon**
  The Polyarc/Polygon setting indicates the type of shape that is produced by certain features, such as *Welds, Shadows or Outlines*.

Export Error Tolerance

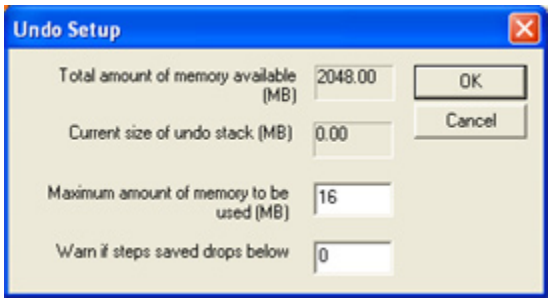
When *Exporting* a file from FastARTIST, the file sometimes contains a very large number of *Nodes*. This is especially true of artwork that was originally imported from another software application. As a solution, FastARTIST files can be exported using a certain *Tolerance Level*. This will make the exported artwork smoother, as well as substantially reduce the number of required *Nodes*.

Error Tolerance is specified using the current Workspace units. We caution against a high *Error Tolerance* value, since this may introduce distortions of the exported Objects. Generally, the default values (0.001 or 1/1,000 of an inch) will work very well for most files.



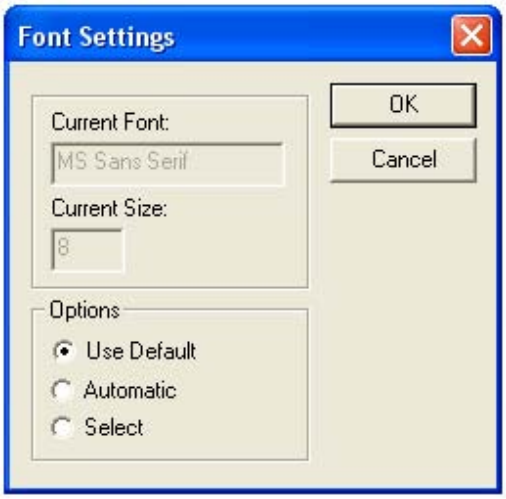
Undo Setup

The Undo Setup dialogue is used to limit the resources that are used for storing Undo operations. Limiting the resources can prevent the loss of system performance that could occur when large quantities of image data are in the Undo stack. Select *Options>FastARTIST Setup>Undo Setup*, from the Pull-down Menu.



Font Setup

Font Settings are used to specify the font type and point size used in dialogue boxes. Select *Options>FastARTIST Setup>Dialog Box Font Setup*, from the Pull-down Menu.



Use Default Indicates that the standard Windows font should be used.

Automatic Chooses the most appropriate font to be used.

Select Enables the dialogue font to be chosen.

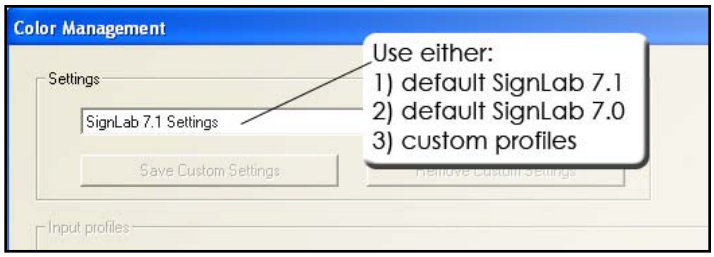
Color Management

Monitors and printers are sometimes referred to by the quality of their *gamut*. Gamut represents the entire range of colors that a device is capable of reproducing. Although it is not possible, a perfect gamut would be all the colors the human eye is capable of perceiving. Compared to large format printers, monitors have a smaller gamut. Furthermore, some printer colors are not reproducible on a monitor and vice-versa.

Color Management settings can be accessed through the *Options* Pull-down Menu in the FastARTIST Setup list. These settings indicate the input and output profiles that will be used when:

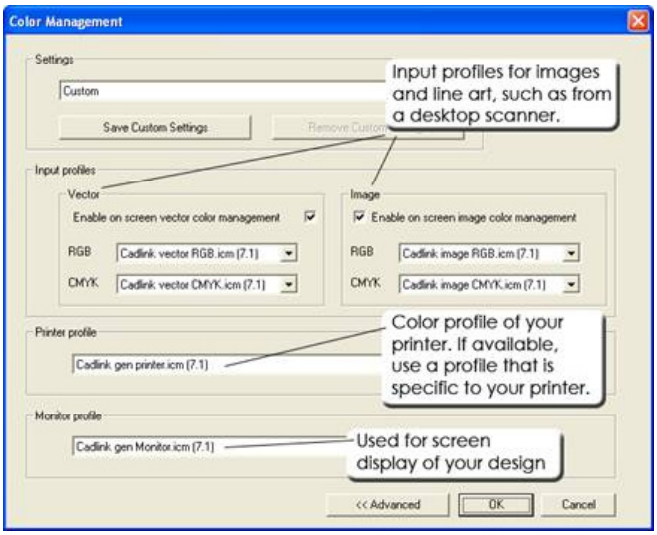
- Using a device (i.e., a scanner) to import an image or line art
- Using a monitor to display the artwork while editing
- Printing to a specific model of printer with specific media and loaded inks

When FastARTIST is installed, SignLab 7.1 settings are used as the default profile. For previous FastARTIST users, SignLab 7.0 profiles are available if needed.



Select *Custom* and click on *Advanced* to select the specific desired.

When using FastARTIST for screen proofing, the *Color Management* profile is used to reconcile printer colors with that of the monitor and produce an image as it would appear when printed.

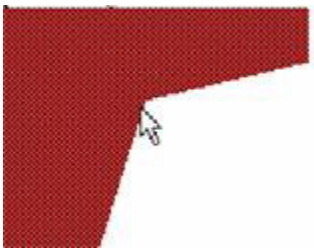


Selection Tool Settings

The *Selection Settings* determine Workspace behavior when shapes are selected and moved using the cursor. To edit the Selection Tool Settings, from the Pull-Down Menu, select *Options>FastARTIST Setup>Selection Tool Settings*.

Use Live Cursor

The *Use live cursor* will recognize when it passes over an Object.



Use live cursor (OFF)

Use live cursor (ON)

Use Filled Region to Select

By default, clicking within the filled region of a shape will cause that shape to become selected. However, this may not be desirable where a complex Workspace has multiple overlapping shapes. If the *Use Filled Region to Select* option is disabled, then a shape may only be selected by clicking the edge of that shape.

Use Default Snapping Range

The *Snapping Range* determines how close a mouse click must be before it snaps to the nearest grid or line. The default range is three pixels. Un-check this option and enter a number in the data box to create a custom range.

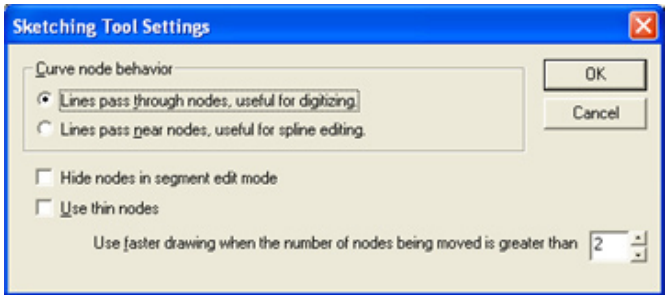
Highlight Selected Objects

The *Highlight selected Objects* option is used to draw a border around the desired Objects. The Highlight size field may be used to make the highlight more prominent.

Shapes that are on a *Cut Only* layer will be given a **Red** highlight. For shapes that are on a *Print and Cut* layer, you may select the color for the highlight. These highlights are intended as a quick visual cue to confirm the nature of a given shape.

Sketch Tool Settings

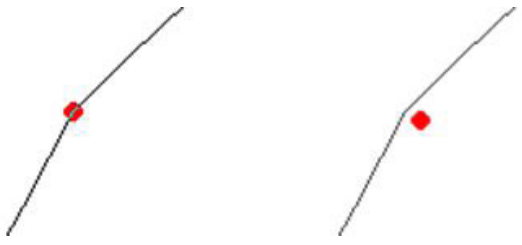
Sketch Tool Settings are used in conjunction with Graphic Creation tools and for editing vector graphics. from the Pull-down Menu, select *Options>FastARTIST Setup>Sketch Tool Settings*.


Sketching Tool Settings
Curve node behavior
Lines pass through nodes, useful for digitizing
Lines pass near nodes, useful for spline editing
OK
Cancel
Hide nodes in segment edit mode
Use thin nodes
Use faster drawing when the number of nodes being moved is greater than
2

Under the *Curve node behavior* heading there are two options.

1. The *Lines pass through nodes* option will cause lines to pass directly through the center of a given Node.

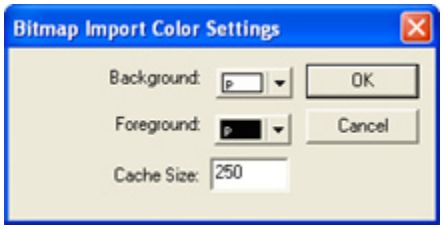
2. The *Lines pass near nodes* option will cause the line to pass near but not touching the Node.



(1) (2)

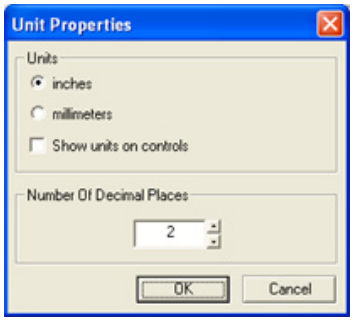
Import Bitmap Setup

When importing a monochrome bitmap, the *Bitmap Import Color Settings* dialogue will specify the Foreground and Background colors of the Bitmap. from the Pull-Down Menu, select *Options>FastARTIST Setup>Import Bitmap Setup*.



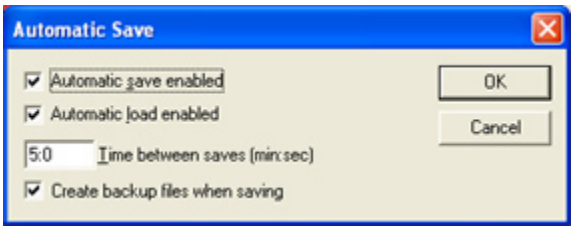
Display Units

The *Unit Properties* dialogue specifies the units and precision with which Workspace controls are displayed.



Automatic Save

The *Automatic Save* feature is used to store the current Workspace at preset intervals. This protects against the loss of work due to system failure.



If a system failure does occur, then restarting FastARTIST will restore the Workspace. The amount of work recovered will depend on the *Time between saves* setting. If the time interval is too large, then a significant amount of work could potentially be lost. However, setting a time interval that is too small will cause FastARTIST to frequently interrupt your work when performing auto saves. Access *Automatic Save* under the Options Pull-down Menu.

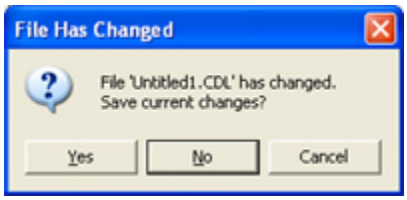
Automatic Load Enabled

Automatic Load is only valid when the *Automatic save enabled* option is checked. When active, restarting FastARTIST will automatically restore the last Workspace that had been stored by the *Automatic save enabled* option.

This feature is useful where FastARTIST has been shut down using the *File > Exit* command, but when you neglected to save the Workspace.

Create Backup Files When Saving

When the *Save* or *Save As* commands are used, a backup (.BAK) file will also be created. The backup file will have the same preface name as the Workspace (.CDL) file, and it will be stored in the same directory.



NOTE: Backup files are a good safety measure against losing work. However, old backup files must be periodically purged from the system- they can potentially consume tremendous amounts of hard drive space.

Ruler Positions

To change the ruler positions on the Workspace, select *Options* > *Ruler Positions*. *Select View* > *Show Rulers* to toggle the rulers ON or OFF.

Hot Key Listings

Customize Shortcuts

This dialogue box allows you to modify any Hot Key combination to one of your choosing. Listed on the following pages are the default Hot Key combinations.

Generic Hot Keys

Nudge selected Object by one pixel	[Arrow key]
Nudge selected Object by five pixels	[Shift + arrow key]
Change current focus to next Object in sequence	[Tab]
Change current focus to previous Object in sequence	[Shift + Tab]
Move/Draw/Edit/Select with horizontal and vertical constraint	[Ctrl + Select tool]

Alignment Hot Keys

Horizontally align Objects along left-edge of bounds	[Alt + 1]
Horizontally center Objects within bounds	[Alt + 2]
Horizontally align Objects along right-edge of bounds	[Alt + 3]
Vertically align Objects along top-edge of bounds	[Alt + 4]

Vertically center Objects within bounds	[Alt + 5]
Vertically align Objects along bottom-edge of bounds	[Alt + 6]
Center Objects both horizontally and vertically	[Alt + 7]

Note: "Bounds" refers to the rectangular outline of each Object.

File Menu Hot Keys

New Workspace	[Ctrl + N]
Open Workspace	[Ctrl + O]
Save Workspace	[Ctrl + S]
Print Workspace Objects	[Ctrl + P]

Edit Menu Hot Keys

Undo last command	[Ctrl + Z] or [Alt + Backspace]
Redo last command	[Ctrl + Y] or [Ctrl + Backspace]
Repeat last command	[Ctrl + R]
Cut selected Object	[Ctrl + X] or [Shift + Del]
Copy selected Object	[Ctrl + C] or [Ctrl + Insert]
Paste Object	[Ctrl + V] or [Shift + Insert]
Delete selected Object	[Del]
Duplicate selected Object	[Ctrl + D]
Edit selected Object	[Ctrl + E]
Edit font of selected text	[Ctrl + I]
Select all Objects on Workspace	[F3] or [Ctrl + A]
Deselect all Objects	[Shift + F3]
Inverse the selection of Objects	[Alt + F3]
Refresh the Workspace display	[F4] or [Alt + D]

Layout Menu Hot Keys

Activate the Alignment feature	[Alt + K]
Apply the current Alignment dialogue settings	[Ctrl + K]
Group the selected Objects	[Ctrl + G]
Ungroup the selected Objects	[Alt + G]

Arrange Menu Hot Keys

Move the selected Object to the top layer	[Ctrl + F]
Move the selected Object to the bottom layer	[Ctrl + B]
Move the selected Object up one layer	[Ctrl + U]
Move the selected Object down one layer	[Ctrl + L]
Reverse the layer order of the selected Objects	[Ctrl + M]
Create a common path from the selected Objects	[Ctrl + H]
Reverse the common path that was applied to a group of selected Objects	[Ctrl + J]
Convert the selected text to graphic Objects	[Alt + B]
Simplify the selected Object	[Shift + F2]
Create a clipping shape from the current selection	[Alt + C]
Remove the clipping that was created	[Alt + U]

View Menu Hot Keys

Toggle the display of Object fills	[Alt + S]
Toggle the display of bitmaps	[Alt + M]
Toggle the display of the line style	[Alt + N]
Toggle the display of the rulers	[Alt + R]
Toggle the display of the Instant Replay window	[Alt + I]

Options Menu Hot Keys

Snap to grid	[Ctrl + W]
Use guides	[Alt + W]

Functions Keys

Help	[F1]
Disable all Shop palette colors except the current target color	[F2]
Select all Objects	[F3]
Refresh the Workspace	[F4]
Activate the Zoom In tool	[F5]
Zoom out	[F6]
Zoom in	[Shift + F6]
Zoom to selected Object	[F7]
Zoom to Page	[F8]
Toggle between current and previous zoom levels	[F9]
Select the menu bar	[F10]
Pan Workspace toward current mouse position	[F11]

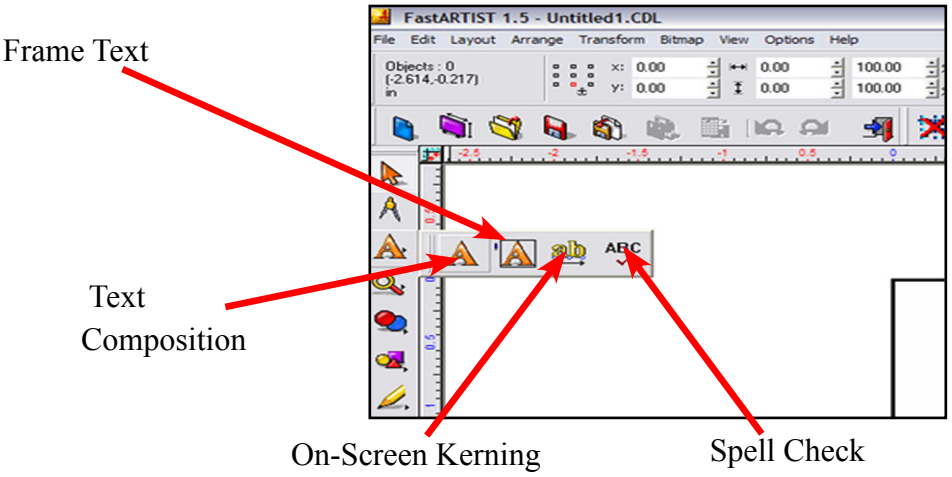
Cut Menu Hot Keys

Open the Cut Preview plotting controls	[Alt + P]

Chapter 4

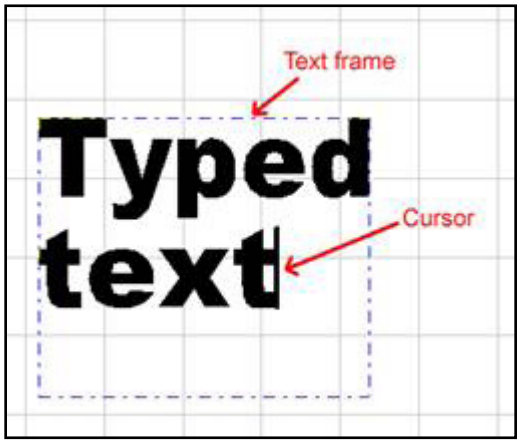
Working with Text

Text tools can be accessed through the *Text Tools flyout*. Here you will find four tool options that will be further covered throughout this chapter.

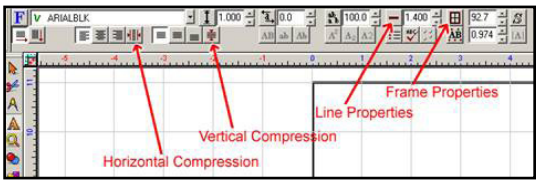


Text Composition

This is the main option you will use when adding text. Select this option and drag a marquee within the Workspace with the mouse (for paragraph text) or click where you want the text to be (1-line text). The marquee will be represented by a dashed rectangular that will remain fixed as text is typed. When adding characters inside the marquee, its properties will determine how the text will compress, expand and wrap.

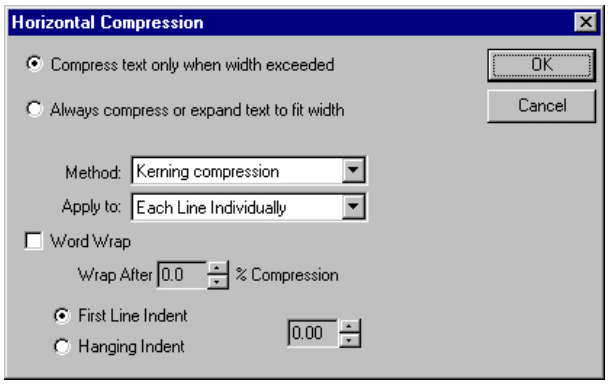


The *Horizontal Compression*, *Vertical Compression* and *Line Properties* buttons are used to change the behavior of how text fits within the frame.



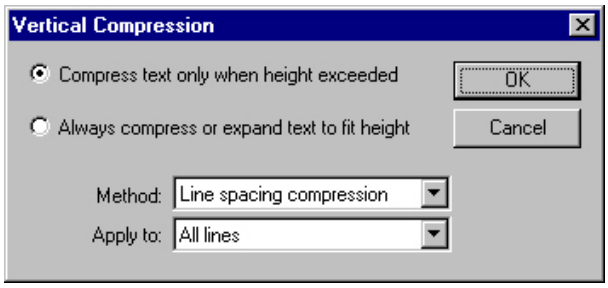
Horizontal Compression

Click on the *Horizontal Compression* button to modify how text is arranged to fit on a line. Using compression, text may be prevented from exceeding a set line length. Conversely, expansion may also be used to spread text over the entire line length. *Word Wrap* can be set to occur after a specific amount of compression has occurred. This command is only available when the text frame width is fixed.



Vertical Compression

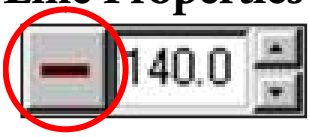
The *Vertical Compression* button may be clicked to specify how lines of text are arranged within a text frame. This command is only available when the text frame height is fixed.



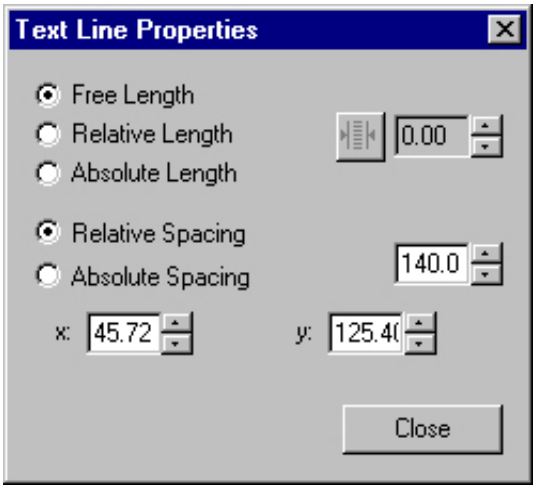
IMPORTANT POINT

If a given line of text contains a mix of character sizes, then vertical compression will be based on *the height of the first character* on *that line.*

Line Properties



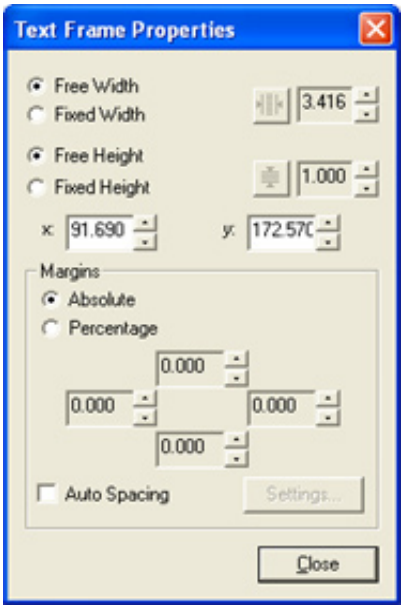
Clicking on this button brings up the *Text Line Properties* dialogue.



- The *Free Length* option allows the line to run to its "natural" length, based on the height, width and kerning settings.
- *Relative Length* will resize the line to a percentage of its natural length.
- *Absolute Length* will fix the line to a specific length.
- Spacing is used to determine the vertical distance between successive lines of text.
- *Relative Spacing* is expressed as a percentage of the font height. Typically, a relative spacing of 150% is a reasonable default.

- *Absolute Spacing* will maintain a set distance between successive lines, expressed in current Workspace units.
- The X and Y fields will position a line of text at specific coordinates.

Frame Text



The purpose of a *Text Frame* is to constrain text to a given height and width. Click on the *Frame Properties* button to open the Text Frame Properties dialogue.

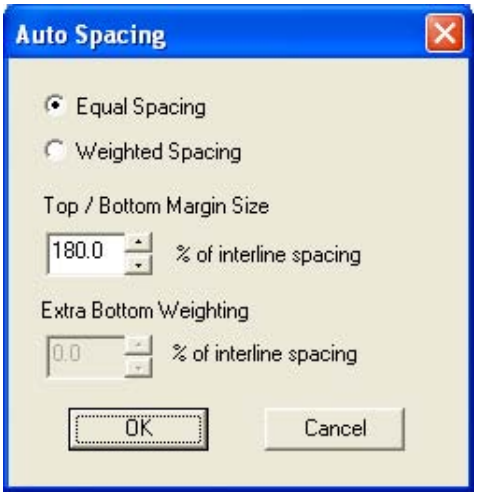
If you select the *Free Width* or *Free Height* options, the text will be set according to the default height, width and kerning settings for the given font. *Fixed Height* and *Fixed Width* will constrain fonts to User Defined values.

The X and Y fields are used to position a line of text at specific coordinates.

Text frame *Margins* may be set in terms of absolute distances from the text frame edge, or by a percentage of the text frame size.

Auto Spacing

Checking the *Auto Spacing* option in the Text Frame Properties window (previous section) will enable the *Settings* button. Clicking on the *Settings* button will open the *Auto Spacing* dialogue.



IMPORTANT POINT

To use the Auto Spacing *controls, the text must have been created using the* Frame Text Compose *option.*

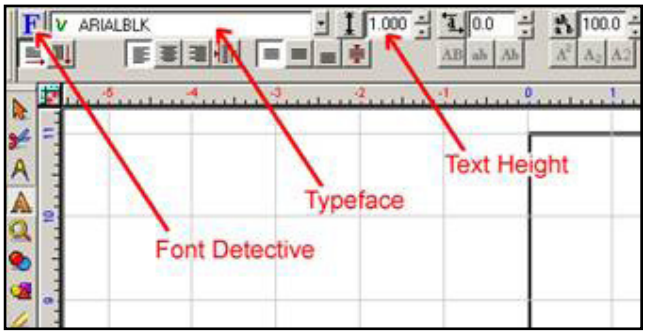
- **Equal Spacing:** *Equal Spacing* establishes lines of text at equal distances apart. The *Top/Bottom Margin Size* settings affect interline spacing. A value of less than 0 will decrease the distance between the lines of text. A value greater than 0 will increase the distance between the lines of text.

- **Weighted Spacing:** Selecting Weighted Spacing will enable the spacing between lines of text to vary. Entering a value of greater than 100% in Extra Bottom Weighting will increase the size of the bottom margin. Entering a value of less than 100% in Extra Bottom Weighting will decrease the size of bottom margin.

Line Compression

Next to the *Frame Properties* button is the *Line Compression* field. This field is used to compress a line to a percentage of its original width. For example, enter 50 to compress the line to 50% of its original length.

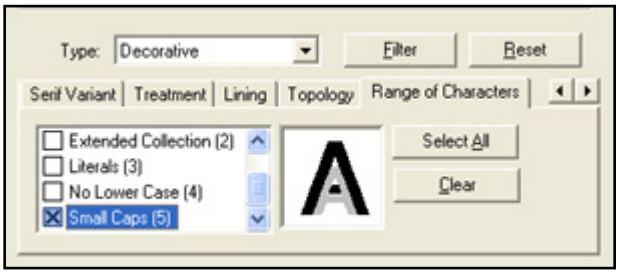
Choosing the Font



The *Typeface dropdown* list will display a menu of all installed fonts in alphabetical order.

In addition to the *dropdown* list, the *Font Detective* can be used to search for installed fonts based on specific criteria, such as thickness, script lettering and serifs. In addition to general info and location information about each font, Panose font information is displayed. Panose is a typeface matching system used to classify and/or match type styles.

For example, if you wished to locate all Small Caps fonts, set the *Type* of font to "Decorative" and limit the Range of characters to "Small caps." After clicking on the *Filter* button, the *Font* Detective will show all the available Small Caps fonts.



Picture Guide

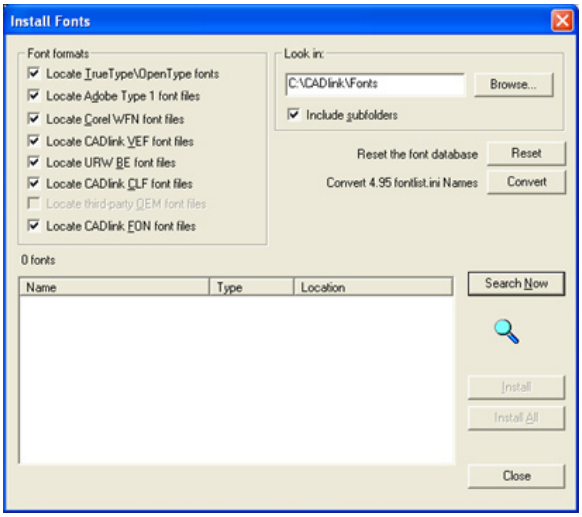
When choosing which font attributes to filter for, a picture guide is provided as an aid. Some examples are as follows:

Display CADlink VEF fonts

Display CADlink VEF fonts and TrueType fonts

Installing New Fonts

FastARTIST supports a wide range of font technologies, such as TrueType and Adobe Type 1 fonts. To use a new font with FastARTIST or to use a VEF that was not installed with FastARTIST go to *File* > *Install* > *Fonts*.



You will be prompted for the location of the new font(s). Use the browse button to select the folder in from which the font(s) will be copied. If you are copying fonts from a CD, select the drive in which the CD is located.

IMPORTANT POINT

Be cautious of registering fonts on a CD or other removable media, since this will require that the media containing the font be inserted prior to beginning FastARTIST sessions.

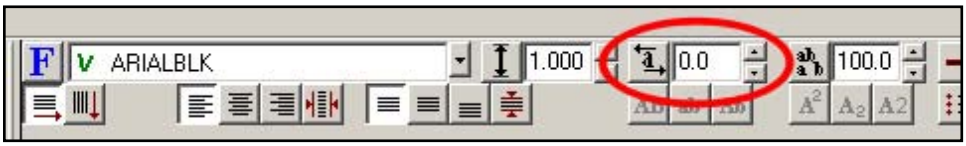
Specify the type of font formats that are desired and click on the *Search Now* button. A list of recognized fonts will populate the data field. These fonts may be installed individually, or you may select the *Install All* button. Once the fonts have been installed, they are registered for use within FastARTIST and they will be available from the *Typeface dropdown* menu when editing text.

Although not recommended for regular usage, the *Reset* button will remove all fonts from the database, except for CADlink VEF fonts. The *Reset* button is provided as a means of purging the database. This is a convenient means of reconciling many different font references. The fonts should be loaded again from a common folder.

Text and Special Effects

Slant

Slant is used to tilt the text either right or left. This is not a substitute for choosing an italic font, but it does create an effect that is similar to italics.



Slant is expressed in degrees with a range of +30 (right) to -30 (left) degrees. Clicking on the *Slant* button will reset the value to zero.

Slant of +15 degrees
Slant of -15 degrees

Text Orientation

Horizontal Text: Arrange text from left-to-right.

Vertical Text: Arrange text from top-to-bottom.

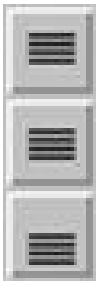
Justification

Left Justify

Center Justify

Right Justify

Line Spacing



Align text with top of frame

Center text within frame

Align text with bottom of frame

Case Control

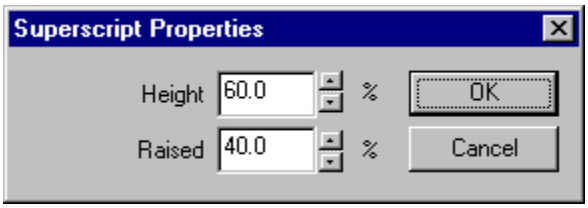
Upper Case: Convert selected text to upper case.

Lower Case: Convert all selected text to lower case.

Proper Name Case: For each word selected, the first letter will be upper-case and the remaining letters will be lower-case.

Superscript, Subscript Placement

You may *right-click* on both the *Superscript* and *Subscript* buttons to customize their settings.



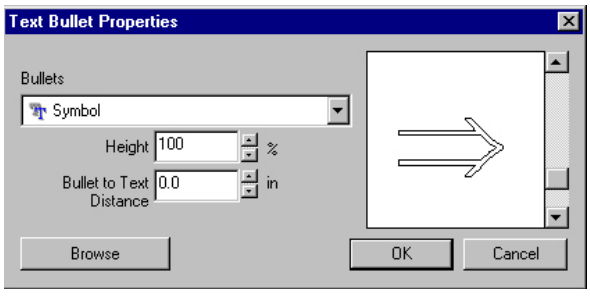
Superscript: Creates raised lettering.

Subscript: Creates lowered lettering.

Unscript: Removes superscripts and subscripts.

Bullets

Clicking on the *Bullets* button will place a bullet. To customize the shape of the bullet, *right-click* on the *Bullets* button.



The bullet design may be selected from any registered font. You may also use the *Font Detective* to assist in finding a desired font and bullet.

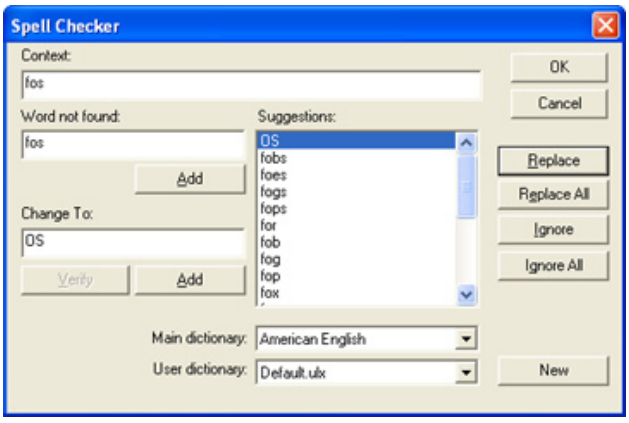
Spell Check

When editing text, click on the *Spell Check* button to verify the spelling of the currently selected text. If no text is selected, then the entire text object will be checked.

If spelling errors are found, the *Spell Checker* dialogue will open.

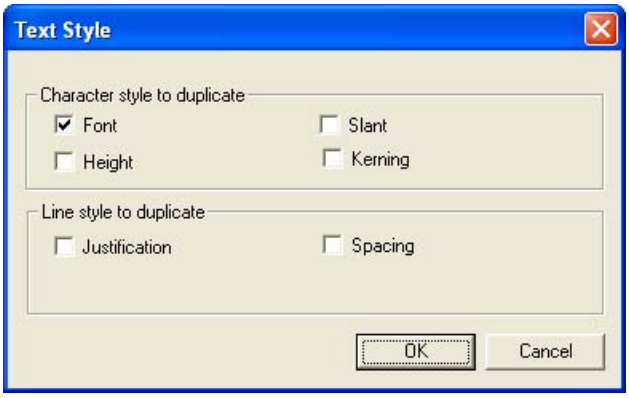
Default dictionaries for several languages are provided. The Main Dictionary selection represents the active dictionary. In addition, a User Dictionary may be created by clicking on the *New* button.

When checking for spelling errors, both the Main and User Dictionaries are referenced. If new words are added, the User Dictionary will be used to store the new word. The Main Dictionary always remains static.

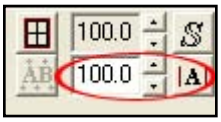


Style Painter

When editing a paragraph of text, the *Style Painter* tool is used to copy the font style from one sentence to another. By *right-clicking* on the *Style Painter* button, the *Text Style* dialogue is used to select what style elements will be copied.



Character Width



The *Character Width* tool can apply compression to individual characters of a word. *Right-clicking* on the *Proper Character Width* button opens the *Character Width Style* dialogue.

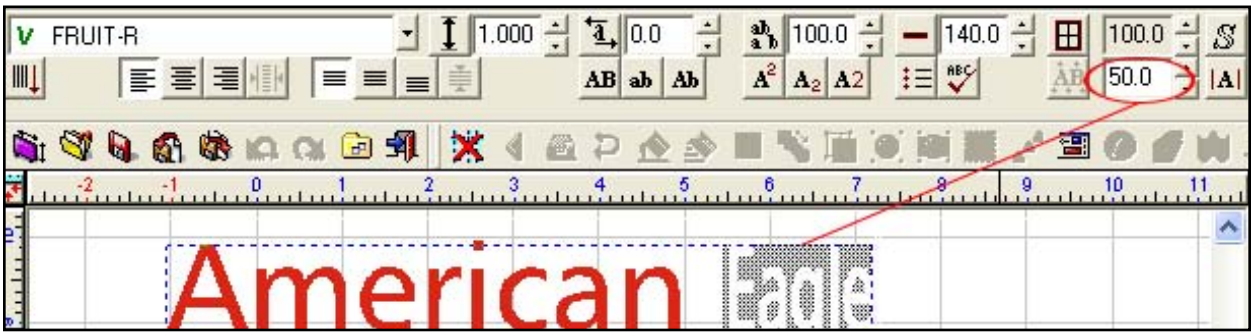
The *Width Style* options are as follows:

Free width: Maintains the characters at their original widths. This setting does not allow the *Character Width* to be adjusted.

Relative width %: Adjusts the character width as a percentage of the original width.

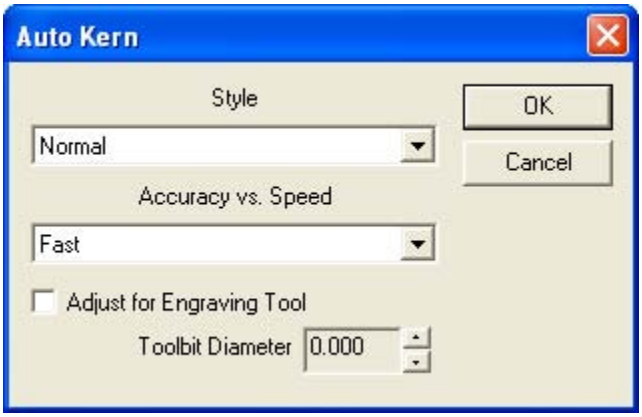
Absolute width: Adjusts the character width to be a specific width.

Once the type of *Width Style* has been selected, highlight the text and enter a value into the *Character Width* field. For example, the following screenshot indicates that some characters have been compressed to 50% of their normal widths.



Kerning

The *Auto Kern* command balances the white space between characters. The *Kern Percent* field is used to specify what percentage of standard kerning is to be applied. Reducing the percentage will decrease the space between characters. Increasing the percentage will move characters further apart.



Kerning of 115%
Kerning of 90%

Customize the *Auto Kern* feature by *right-clicking* on the *Auto Kern* button.

Normal: Balances the amount of white space, while maintaining normal character spacing.

Wide: Inserts approximately 20% extra white space between characters.

Narrow: Removes approximately 20% of white space between characters.

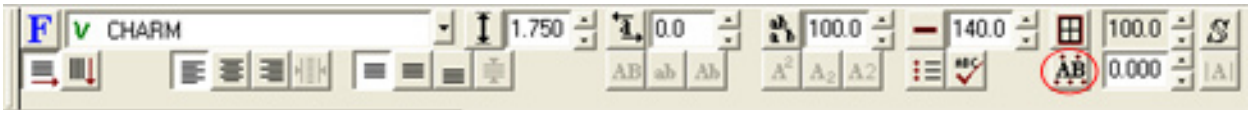
Touching: Arranges the characters so that their finials touch, yet do not overlap.

Overlap: Forces adjacent characters to overlap by approximately 5%.

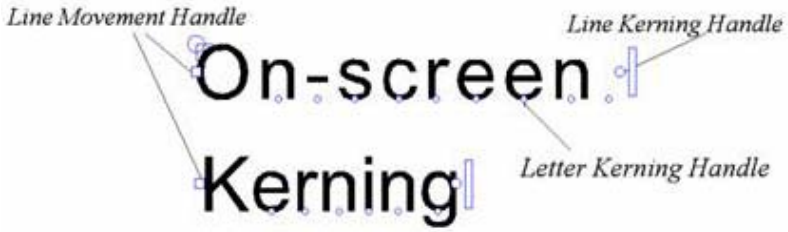
NOTE: Accuracy versus Speed- *Due to the number of calculations involved with finding the best kerning for a given pair of characters, it may be desirable to sacrifice some of the kerning accuracy in exchange for faster results. If so, then choose the Fast setting instead of Accuracy. The Fast setting will often produce acceptable results.*

Manual Kerning

The *On-Screen Kerning* feature is used to make manual adjustments to text using a special set of kerning nubs. The kerning nubs may be used to adjust inter-line spacing, line kerning, individual letter pair kerning and the alignment skew of text.



Holding [Ctrl] and *double-clicking* on a text object will also allow you to access *On-Screen Kerning* mode.



Kerning handles may be dragged using the mouse. In addition, clicking on a handle will cause that handle to become selected and the cursor keys may be used to move that handle one pixel at a time. Holding the [Shift] key will move a handle by five pixels.

The types of kerning handles are:

- The *Line Movement Handle* - used to position the line of text. Holding the [Ctrl] key may be used to constrain the movement of the line. Holding the [Shift] key will align all the text lines along a path between the current handle and the handle of the first line.

- The *Line Kerning Handle*- used to adjust kerning for the current line. Holding the [Ctrl] key will adjust the word kerning, while keeping the space between adjacent characters constant.

- The *Letter Kerning Handle*- adjusts the kerning of characters that are opposite the Line Kerning handle.

Font Editing and Creation

FastARTIST can modify existing fonts or create new ones from scanned, digitized, or hand-drawn objects. Regardless of whether the font is new or edited, it will always be saved in .VEF format, even if the original font had been stored in another format, such as True Type (TTY) or Postscript (PFB).

Any Workspace object can be converted into a font character. However, the object must be a single-path graphic. Imported or grouped objects must be welded and/or converted to a single path prior to creating a font version from those objects.

To import objects that have multiple paths, use the *Make Path* command to convert them into a single path. The *Text to Graphics* command must also be applied.

Editing an Existing Font

When editing fonts, it is important to understand how the placement of individual letters is accomplished. As a rule, each character's font metrics include two general types of information: (a) the shape and size of the character itself and (b) its placement in relation to the other characters in the font.

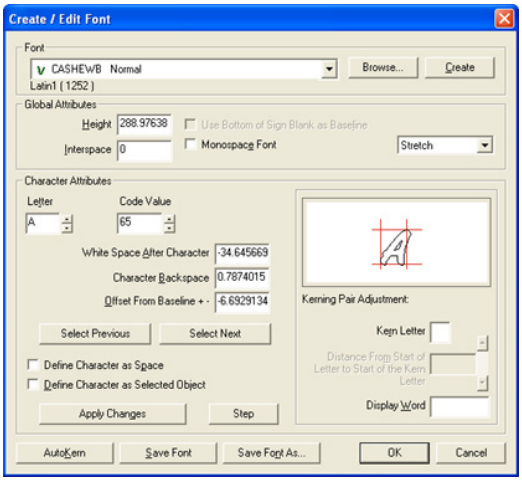
The area that a character occupies can be thought of as being an enclosed box. The box is considered to have an x-axis, a y-axis and an origin in the lower-left corner.

Such placement information is necessary to help arrange adjoining letters correctly, while also considering any possible descenders. The three primary adjustments are *White space after the character, Character backspace and Offset from the baseline*.

Choosing *Edit Font* from the *Edit* menu will open the *Create/Edit Font* dialogue.
When editing a font, there are two broad classes of adjustment:

- ***Global Attributes*** are applied to all of the characters in a given font.

- ***Character Attributes*** are specific to a single character within the font.



Creating a New Font

To create a new font, click on the *Create* button. Enter the name of the new font in the *Create New Font* dialogue and click on *OK*. You will be prompted for a name under which to save the font.

IMPORTANT POINT

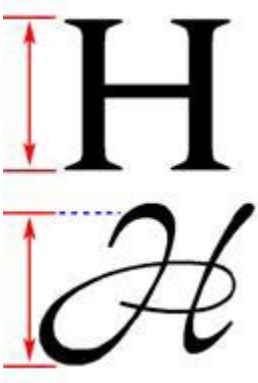
You must use a Font Name that is different from an original font. Otherwise, the original font data will be overwritten.

Global Attributes

Adjustments to the *Global Attributes* are used to define the general appearance of a font. These adjustments will be applied to all the characters within the font.

Font Height

Font Height defines the actual height of the font as it was created. When creating a new font, the height of a reference letter should be entered so that the remaining characters can be sized correctly.



For example, suppose that an uppercase ‘H” were chosen as the reference letter (this is a typical choice). For the *Height* field, you would measure the height of the ‘H’. It is very important to assign an appropriate height to a font being created. The height of a font is often based on the height of an uppercase M or H. The precise letter height will be used when creating a block-style font, whereas script fonts may require a more creative estimate of height. Notice how the script character is slightly taller than the non-script character.

Interspace

Interspace is the nominal amount of trailing white space that provides a gap between following letters. By modifying the *Interspace*, fonts can be given either a wide or a narrow kerning.

For example, using a negative value will create a condensed font.

Use Bottom of Blank Page as Baseline

The baseline will determine the vertical position of a character. When creating a new font, the vertical position of each character is defined in relation to the baseline. Two options are available to assign the vertical position of characters:

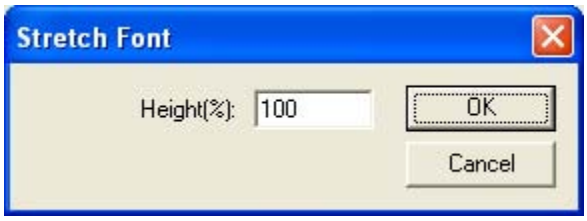
- *Offset from Baseline*- Used to manually adjust each of the characters
- *Use Bottom of Sign Blank as Baseline*- Automatically assigns the character baseline. To enable, check the *Define Character as Selected Object* option under the *Character Attributes* section of the dialogue and use the *Align* feature to arrange the characters along the bottom of the sign blank.

Monospace Font

The *Monospace Font* option converts the font to a fixed-width font in which each character occupies the same amount of horizontal space regardless of its width. For example, the character 'i' would have as much width as an 'm'.

Stretch

The *Stretch Font* dialogue is used to adjust the ratio between the font height and width, expressed as a percentage. A value less than 100 produces a font that is short and wide, whereas a value greater than 100 produces a font that is narrow and tall.



Slant

The *Slant Font* dialogue is used to specify the slant degree for the font characters. A positive slant will create an Italic font, whereas a negative slant will create a "backhand" appearance.

Character Attributes

Letter

This box is used to specify the character currently being created or modified. The edit box displays the actual character.

Code Value

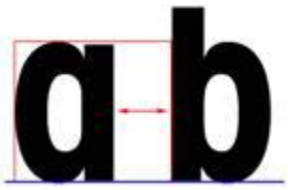
For computers to recognize text characters, a numeric value called the ANSI standard is used. This is a widely accepted standard that ensures text data will be understandable between different models of computers. For a given font, there are 255 characters in the ANSI character set, which encompasses upper-case letters, lower-case letters, numbers and (sometimes) special symbols.

Because some of these ANSI values are intended for communication protocols between devices, not all of the characters will be printable. For example, the first 31 characters are reserved for special command sequences that would be recognizable by a modem or printer, but which have no significance for our purposes of editing a font.

The following table indicates some sample values:

ANSI Code Value	Which we know as:	CASHEWB Font	EMBASSY Font
65	The letter ‘A’		
66	The letter ‘B’		
67	The letter ‘C’		
97	The letter ‘a’		
98	The letter ‘b’		
99	The letter ‘c’		
48	The number ‘0’		

White Space After Character



This field is used to adjust the width of a character bounding box. In effect, this will increase the separation from the following character. Although this is similar to *Interspace*, keep in mind that this setting is applied on a per character basis. *Interspace* is used to adjust the overall kerning of the font characters.

Character Backspace

Character backspace is used to move the character with respect to its bounding box origin. In effect, this will place the character either further away, or closer to, the preceding character.

Offset from Baseline

The Offset from Baseline adjusts the vertical character placement with respect to the baseline.

For example, an uppercase H in a sans serif font will generally have an offset of 0 (no offset). This means that the bottom of the actual letter will be the same as the bottom of the letter's bounding box.

On the other hand, a lowercase 'g' will require a negative offset, so that it's descender (the tail) will fall below the baseline.

Select Previous and Select Next Buttons

Font characters can be designed on the FastARTIST Workspace and then added to a new font. FastARTIST orders Workspace objects according to the sequence in which they were created. Using the *Select Previous* and *Select Next* buttons, you may browse Workspace objects without leaving the *Create/Edit Font* dialogue. When the correct object is selected, click on the *Apply Changes* button to create the character.

For example, if you have created a new alphabet, with objects for "A B C D E F..." etc. in the Workspace, you would go to the *Create/Edit Font* dialogue and set the *Code Value* to 65. You would then use the *Select Next* button to select the 'A' object within the Workspace.

Click on *Apply Changes* to create the new character and then increment the *Code Value* to 66. Click on the *Select Next* button to select the 'B' object, and click on *Apply Changes* again. This process would be repeated for each character that you created for the font.

Define Character as Space

There is also a non-printing character that is often forgotten, but which must be present in a font: the *Space* character. Without the *Space* character, which appears when the space bar is pressed, there would be no spaces between the words created when composing text, Therefore it is critical that a *Space* character be included when generating a font.

There are two ways to create the *Space* character:

- To use an existing character, select a character that best represents an appropriate space and enable the *Define character as space* option.

- To create the *Space* character using an object, exit the *Create/Edit Font* dialogue and create an object that has an area that is appropriate for the font. Once the object is selected, open the *Create/Edit Font* dialogue and enable the *Define character as space* option.

Define Character as Selected Object

When editing a font, select an object to be included in the font as a character. To designate a selected object as the current character, check this box.

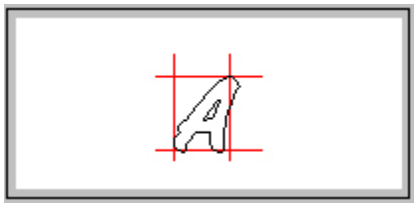
Note: If the *Not a Path* warning appears, then select *Arrange* > *Make Path*.

Apply Changes

Clicking on *Apply Changes* will save the character information and allow you to begin editing another character. Note that the changes are not saved to disk until the font is saved using the *Save Font* or *Save Font As* button.

Display Box

This box displays the current information for the character being edited. It also displays the bounding box for the selected character (including a top line representing the font height) and the character's current placement within the box. When changes are made to the character, those changes are immediately reflected in the display box.



The Display Box will display kerning pairs, as well as words where necessary.

Kern Letter

The *Kern letter* field indicates the character to be manually "kerned" in the trailing position, relative to the character currently being edited. The letter pair will then be displayed in the display box.

This setting identifies the exact distance between the start points of the two characters. A larger number increases the space while a smaller figure reduces the space. This setting is grayed out and unavailable unless a kern letter is selected to be paired with the current character.

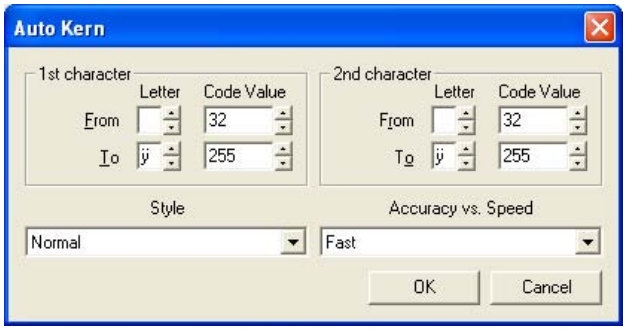
Display Word

To examine the kerning set for a given letter in a realistic context, type a word containing the letter in the *Display Word* box. The word will be displayed in the Display Box.

IMPORTANT NOTE

In order for the word to appear in the display box, it must contain the character currently being edited.

Auto Kern



This button opens the *Auto Kern* dialogue box.

Auto Kern is used to automatically generate a kerning table for a given font. Kerning tables contain information about the spacing between pairs of characters.

The *Auto Kern* feature is similar to the *Text On-Screen Kerning* feature that is available from the *Text Tools* menu. Once kerning information is created for a font, FastARTIST will simply duplicate the kerning table already defined.
Due to the time required to generate a kerning table on-the-fly, the main advantage of using *Auto Kern* at the font generation stage is that FastARTIST generates paragraphs of text very quickly when entered in *Text Compose*, since *Auto Kern* will not be used at that stage.

There are four settings that can be adjusted in order to generate a custom kerning able for a font:

- **1st Character:** By definition, a kerning pair has a first (or leading) character and a second (or trailing) character. Use the two entry boxes to specify the range of characters (from first to last) to be set to Auto Kern in the first position. By default, FastARTIST will kern all 255 ANSI characters in the leading position.

- **2nd Character:** Use these two entry boxes to specify the range of characters to be set to Auto Kern in the second position. By default, FastARTIST will Auto Kern all 255 ANSI characters in the trailing position.

- **Accuracy vs. Speed Auto Kern** works by checking and adjusting the distances between a number of points along the height of letter pairs. From the *Accurate versus Speed dropdown* menu, you may choose a value between *Accurate* and *Fast*, providing the ability to find a balance between speed and precision.

  - Using *Fast* will speed up the kerning process by examining only a limited number of points.

  - Using *Accurate* will result in kerning based on the examination of substantially more points.

- **Style Auto Kern** can generate a font with one of five different kerning styles; *Normal, Wide, Narrow, Touching* and *Overlap*.

  - The *Normal* setting kerns the font by adding white space in proportion to the width of the letter.

  - The *Wide* setting kerns fonts at a rate of *Normal* kerning plus 20% (i.e., there is 20% more white space added between each letter).

  - The *Narrow* option sets kerning at *Normal* kerning minus 20%.

  - The *Touching* setting causes letters to touch but not overlap.

  - The *Overlap* setting causes letters to overlap each other by 5% of their *Normal* kerning.

Saving a New Font

When editing a font, the new information is not written to your hard drive until you actually *Save* the font. Until then, the font is buffered. A buffered font is somewhat in limbo — it exists and is available to *Text Compose*, but it has not been committed to the hard drive. This means you still have the option to *Save* or *Discard* changes to the font before exiting FastARTIST.

Saving a font means moving the information out of the buffer and onto the hard drive, making it permanently available. Any font saved is placed in the directory where the existing .VEF fonts are currently located.

Clicking on the *Save Font* button will result in the font being written to disk immediately. The alternative is that FastARTIST provides the option to *Save* the font when issuing an exit command. If the font is not saved before exiting the *Create/Edit Font* dialogue box, you will be prompted to do so when either beginning a new session or exiting FastARTIST.

Save Font As

The function of this button is very similar to the *Save As* command in the *File* menu. Specifically, it provides the opportunity to give an edited font a new name and then save the font under that new name. This is particularly useful when creating a new font by editing an existing font, since it provides for saving the changes under a new name without losing the original font information.

Clicking on *OK* will accept the current font changes and close the *Create/Edit Font* dialogue.

Exiting FastARTIST

Should you choose to not *Save* any font changes before exiting FastARTIST, they will be discarded.

Chapter 5

Importing and Exporting Files

All graphic software applications have proprietary file formats for storing data and each of these formats is designed for a specific type of image. Generally speaking, formats are designed to store either line art (vectors and curves) or bitmaps (raster images). This creates many challenges when swapping data between different applications. Fortunately most graphics applications provide *Import* and *Export* filters to facilitate the exchange of files.

The FastARTIST Workspace supports both line art and bitmaps, so either type of data may be *Imported* or *Exported*. The native FastARTIST file format, CADlink Drawing File (*.CDL), is referred to as a "combination file" because it can contain both line art and bitmap data.

Working with CDL Files

The CADlink Drawing File (*.CDL) can be opened into its own Workspace, using *File > Open*. A CDL file may also be imported into an existing Workspace (*File > Import*) provided the *Merge* option is enabled.

When using the *File > Open* command for the first time, FastARTIST will query whether the intention had actually been to use the *Import* command.

Restoring Printer Info

When a CDL is saved (*File > Save*), the information from the *FastRIP Setup* dialog is stored within the CDL file. When opening the file in the future, enable the *Restore Printer Information* checkbox to load the printer and cutter settings.

Zoom Open

When the *File > Open* command is used, the Workspace will zoom to the loaded Objects. The *File > Zoom Open* command is similar, except that the zoom level will alternate between 1) the current zoom level and 2) zooming to the loaded Objects.

FastARTIST Import Filters

Import filters are designed to convert file data into Objects that can be edited within the FastARTIST Workspace. Often, a customer will provide an obscure file format for an ordered job. You may also need to reuse artwork from older CAD software that is no longer in use. In either case, FastARTIST supports a wide range of import filters which should allow you to load such files with few restrictions.

FastARTIST will *Import* a wide variety of common file formats including TIFF, PSD, JPEG and EPS.

The *Import* command is located in the *File* menu. When *Importing* with the *Merge* option checked, the imported file will be added to the existing Workspace. If the *Merge* option is unchecked, then the existing Workspace will be overwritten. For certain types of files, the *Customize* button will become active in order to specify certain parameters for the given file type.

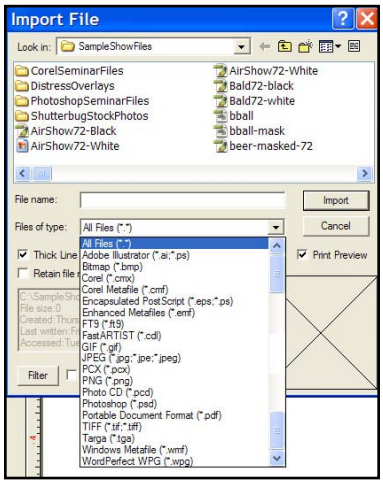
The *Filter* button is used to customize file types that are listed within the *Files of type* menu.

EPS Files

When importing Encapsulated PostScript (*.EPS), be aware that there is a fair amount of variety in how different graphics applications *Export* data to an EPS file. If you encounter problems when importing an EPS file into FastARTIST, then a useful alternative is to *Export* the data as an Adobe Illustrator (*.AI) file instead.

Importing from CorelDRAW

CorelDRAW uses its own proprietary file type called a CDR, however FastARTIST will not *Open* or *Import* a CDR file. If you wish to keep the vector properties of the file, you must *Export* or *Save* it in a generic format such as EPS, AI or CMX. If you examine the *dropdown* menu *Files of type* under the *Import* feature, it lists all the file formats that FastARTIST can import.



Note: EPS, AI and CMX will keep the files in vector format and will not convert them to bitmaps.

Importing PDF Files

Although there are any number of file formats that can be used (PDF, EPS, etc.), the most reliable format is PDF. If possible, request that the customer provide you with a high quality (high resolution) PDF file to avoid any compatibility issues.

Guidelines for Obtaining PDF Artwork

When working in other graphics applications, it is recommended you save your original design as a PDF file and then *Import* the PDF into FastARTIST. By saving your design as a PDF, this avoids compatibility issues with different versions of software. It has the added benefit of embedding fonts to ensure correct type matching. The method of saving your design as a PDF will vary, however, there are common commands for saving a PDF:

- *File > Publish to PDF* – Some design applications have a dedicated *Publish to PDF* command under the *File* menu. This will typically open a *Settings* dialog that allows you to specify parameters for saving the PDF file.

- *File > Save As* – Some design applications use the *Save As* dialog to create a file. In the *Save* dialog, designate the file type as "Portable Document Format (PDF)." In some cases, choosing the file type will reveal a *Customize* button that will allow you to specify the PDF parameters.

- *File > Export* – Older design applications will likely not have a specific PDF save tool, in which case you are expected to use the *Export* command under the *File* menu. In the *Export* dialog, designate the file type as "Portable Document Format (PDF)." In some cases, choosing the file type will reveal a *Customize* button that will allow you to specify the PDF parameters.

- When choosing your PDF save parameters, each application will present different controls, and there are usually more controls than are discussed here. However, this list highlights the most pertinent settings that you need to check. Take care to ensure that the following settings are in effect:

    1. *Font Folder* – Some design applications provide the ability to save the font files in a separate folder, which can be distributed along with the PDF file. When importing the PDF into FastARTIST, the *PDF Import Options* dialog will read the fonts from this folder.

    2. *Font Embedding* – If a *Font Folder* is not used, then *Font Embedding* should be ON to ensure that font information is available in FastARTIST.

    3. The entire font should be embedded, as opposed to a subset that consists only of characters used in the saved PDF. Otherwise, if your design requires any text substitution or serialization, the subset may be missing required characters.

    4. *Subset fonts when percent of characters is less than…* – This option should either be turned off, or its value set to 0% (zero) to indicate that the entire font should be embedded.

5. *Override Distiller Font Options – Distiller options* should be overridden to avoid any unexpected compression, color management or partial font embedding. The *Distiller* refers to the application that Adobe provides for converting documents into PDF.

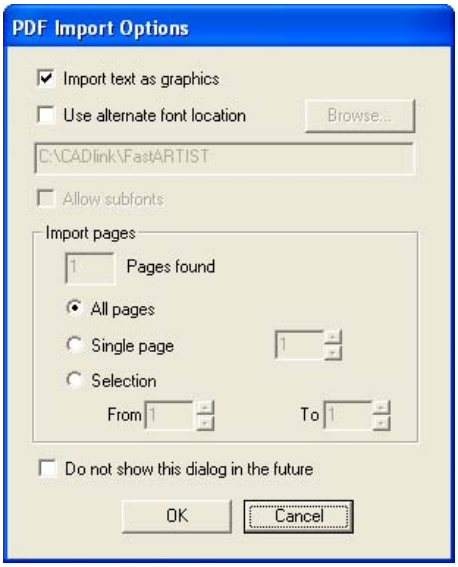
6. *PDF Quality / Image Compression* – If possible, turn off all compression to ensure the highest image quality. In some cases, there will be slider that allows you to choose the quality.

7. *PDF Compatibility* –Compatibility should be set to the most recent version available. Compatibility settings are used in consideration of distributing the PDF, where users may be using an older version of Adobe's PDF Reader.

8. *Save the PDF Settings* – If possible, save the configuration settings that you are using to create your PDF. By having these settings available, less time will be required when a PDF is saved and there is less risk of accidentally forgetting a required setting.

- **Importing a PDF**

Choose *File* > *Import* to open the *Import File* dialog. Set the file type as "Portable Document Format (*.PDF)" and select the desired PDF file to *Import*. Click the *Import* button and the cursor will become an angled cursor. Click on the FastARTIST Workspace to position the top left corner of the imported file.



At this point, the *PDF Import Options* dialog will open, allowing you to select from the following *Import* settings:

1) *Import Text As Graphics* – It is recommended that this option be OFF to preserve the original font information.

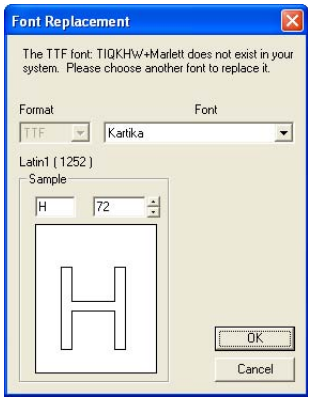
2) *Use Alternate Font Location* – This option is used when a Font Folder was created containing the fonts used in the PDF file. By default, it is expected that this folder is named "Fonts" and is in the same directory as the PDF file being imported. If the *Font Folder* is in a different directory, click the *Browse* button to specify the location.

3) *Allow Subfonts* – A subfont is a subset of the original font info that is restricted to the characters used in the saved PDF file. If this option is enabled, then any embedded fonts will be used. Otherwise, an alternate font location will be searched, followed by a search of the locally installed fonts. If the font info is not found, then a substitute font will be required.

4) *Import Pages* – For a multiple-page PDF, indicate which pages to *Import*. After the pages are imported, the *Paging Tool* can be used to browse through each page.

5) *Do Not Show This Dialog* – Check this option if you wish to hide this dialog. Hidden dialogs can be restored within the *General Preferences* window.

Click on *OK* to close the *PDF Import Options* dialog. If any font information is not found, the *Font Replacement* dialog will open. The missing font will be listed and a substitute font must be selected from the *dropdown* list of locally installed fonts. The *Font Replacement* dialog will reappear for each font that requires a substitution.



A Final Note about Importing Files

The *Import* command is designed to load designs from other applications, while trying to remain true to the types of Objects that were in the original file. For example, a square with a gradient should come in as a square with a gradient, as opposed to a thousand individual Objects that each have a different hue to form the gradient.

Not all applications have the same Object types or attributes, which may cause the Object to be converted. For example, a mesh fill could be arbitrarily converted into a bitmap Object.

Retaining and matching fonts can be problematic also. If possible, save the original artwork as a PDF with embedded fonts. Otherwise, you will need to substitute for a font with the nearest match that you have on the FastARTIST-installed system. You do have the option of converting *Text to Curves* if you are certain no further text editing is required. This will convert the text to a graphic, making spell checking and additional editing unavailable.

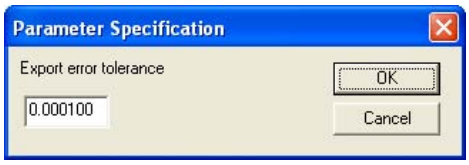
After importing, various Objects are often grouped and bitmaps are sometimes clipped. When an Object is selected, the far left of the SmartBar will indicate the Object type.

If the Object is a "Group," then use *Layout* > *Ungroup* or *[Alt + G]* to break up the grouping. If the Object is a "Clip Group," then use *Arrange* > *Clipping* > *Clipping Clear* or *[Alt + U]* to remove the clipping. After disassembling Object groupings, you will likely need to specify any underbase attributes on an Object-by-Object basis.

FastARTIST Export Filters

The *Export* command is used mainly for line art shapes. However, for file formats that are capable of storing both line art and bitmap shapes (i.e., combination files), the *Export* command can also be used to export bitmap shapes.

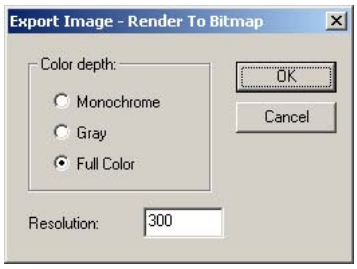
When exporting line art, caution is required to prevent creating file Objects that contain an excessive numbers of Nodes. This is especially true of artwork that was originally imported from other software. To overcome this problem, click the *Customize* button on the *Export File* dialog. The *Parameter Specification* dialog will open



The *Parameter Specification* dialog is used to substantially reduce the Nodes of exported Objects. If the default value is insufficient, then caution is urged against setting a high value for the *Export error tolerance*. As a rule, the default value (0.001 or 1/1,000 of an inch) will work very well with most files.

Exporting an Image

The *Export Image* command is used for bitmap (raster) images, such as BMP, JPEG and PNG files. If line art shapes are being exported, then FastARTIST will render the line art into raster data during the exporting process. During the *Save*, you will be prompted for the resolution and color depth of the raster data.



Publish to PDF

The *File* > *Publish to PDF* command will save the current Workspace as a Portable Document Format (PDF) file. An advantage of PDF files is that they can be viewed using Acrobat Reader, available from the Adobe web site. This is a free program and a very common application. Most computer users have some version of it installed on their system.

Exporting Palettes to CorelDRAW and Illustrator

Spot and *Duotone* colors in FastARTIST palettes may be exported to either CorelDRAW or Adobe Illustrator, ensuring that the same color information will be used when designing an image in these applications. If the finished design is then saved as either an EPS or AI file, it can be imported it into FastARTIST (using the *Map Named Colors* feature) while preserving the one-to-one correspondence between the original colors and the FastARTIST palette.

A common technique is to create a custom *Shop Palette* that has all the *Foils, Spots* and *Duotone* colors available in your shop. By exporting these colors to a CorelDRAW or Adobe Illustrator palette, you ensure your designs are not using colors that will be difficult to find or substitute for.

Scanning to Acquire an Image

The *Acquire Image* option provides access to TWAIN support offered by FastARTIST. This support provides the ability to operate TWAIN-compliant scanners directly from within FastARTIST without any intermediary software. However, to function properly the scanner control software must be properly installed within Windows. The *Acquire Image* options are available from the *File* menu.

Acquire

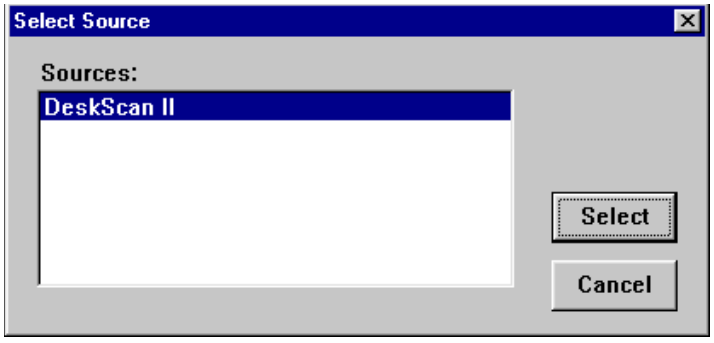
This option calls the TWAIN-compliant software, initializes your scanner and prepares the system to receive a scanned image. Upon exit from the scanning software, the acquired image will be automatically imported into FastARTIST.

Acquire Vector

This is a variation on the *Acquire* command. Where the *Acquire* command will produce a bitmap image, the *Acquire Vector* will produce line art from the scanned image.

Select Source

The *Select Source* option provides the ability to choose the TWAIN input device that will acquire images. If there is only one source (i.e., only one scanner) attached to the system, set this once. If
there is more than one input source available on your system (i.e., a flat bed scanner or a hand-held device), this feature provides the ability to choose between the devices. *Select Source* opens the *Select Source* dialog box:



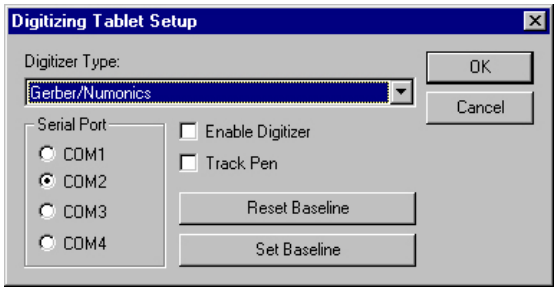
The Sources list will contain all available TWAIN-compliant devices attached to your computer. After choosing the desired device, click on the *Select* button.

Scan and Trace Wizard

The *Scan and Trace Wizard* includes all the steps to *Import* and trace an image. In addition to importing a scanner image, the Wizard can accept either an image data file or images that were copied to the Windows clipboard from another application.

Digitizing Setup

FastARTIST has the ability to interface with a digitizing tablet without the need for intermediary software drivers. Once the tablet is connected, configure it using the *Digitizing Tablet Setup* dialog available in the *Edit* menu.



Enable Digitizer

This check box is used to enable and disable the Digitizer. In order to reduce the load on your system, it is recommended the Digitizer be disabled when not in use. This will prevent FastARTIST from polling the tablet, freeing up system resources.

Track Pen

This check box is used to enable and disable the tracking of the Digitizing Pen. In order to reduce the load on the system, it is recommended that the digitizer be disabled when not in use. This will prevent FastARTIST from polling the tablet, freeing up system resources.

Reset Baseline

When starting a new drawing, or if the original angle and position of the tablet baseline needs to be restored, select the *Reset Baseline* option. The baseline of the tablet will be reset to match that of the material.

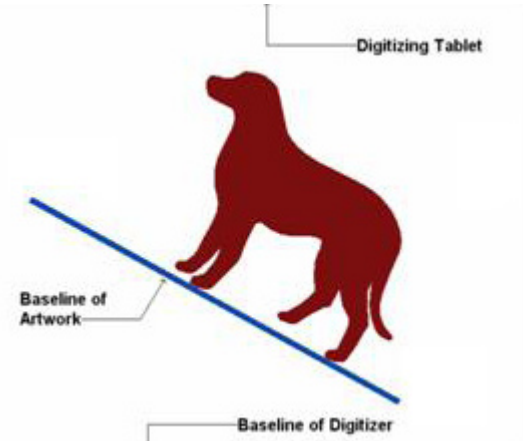
Set Baseline

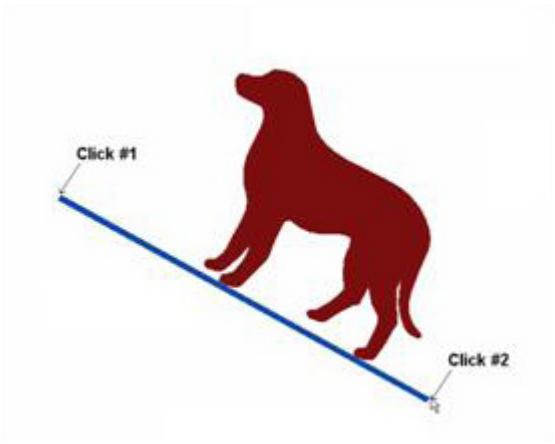
The baseline of a drawing defines both the bottom of the artwork, as well as the angle of the horizontal axis.

Typically, a Digitizer designates the bottom of the tablet as the baseline, which FastARTIST will use as a reference. Use the *Set Baseline* button to align the baseline with that of the artwork, rather than the tablet bottom. This avoids the requirement that the artwork be precisely aligned with the bottom of the tablet.

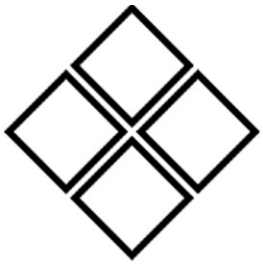
Using a Digitizer

Curve Nodes drawn by a Digitizer are different from those created by the mouse in standard *Draw Mode*. *Draw Mode* uses the Nodes as control handles that pull at the curve as it is formed. A curve drawn in Digitizing mode will pass directly through the Nodes in a more "connect-the-dots" fashion.





When using a Digitizer, certain button combinations may be used to form basic shapes. Place two *Corner Nodes* to form the opposite corners of a rectangle and then *double-click* the *Finish* button to complete the rectangle. You can place two *Curve Nodes* to form the diameter of a circle and then *double-click* the *Finish* button to complete the circle. Placing three *Curve Nodes* and then *double-clicking* the *Finish* button will fit a circle within the three Nodes. If four or more *Curve Nodes* are placed, then a circle will be created to best fit within those Nodes.



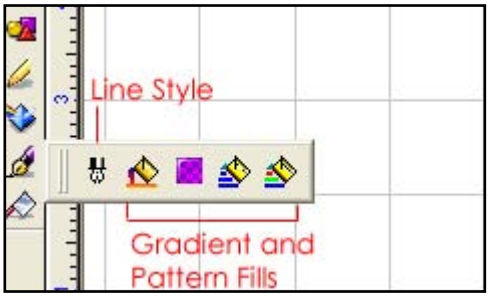
Button	*Function*	*Description*
Top	Corner node	Place corner node on Workspace
Left	Curve node	Place curve node on Workspace
Bottom	Tangent node	Place tangent node on Workspace
Right	Finish	End and close contour, or create custom shapes. Double-clicking will close the contour.

Chapter 6

Palettes, Strokes and Fills

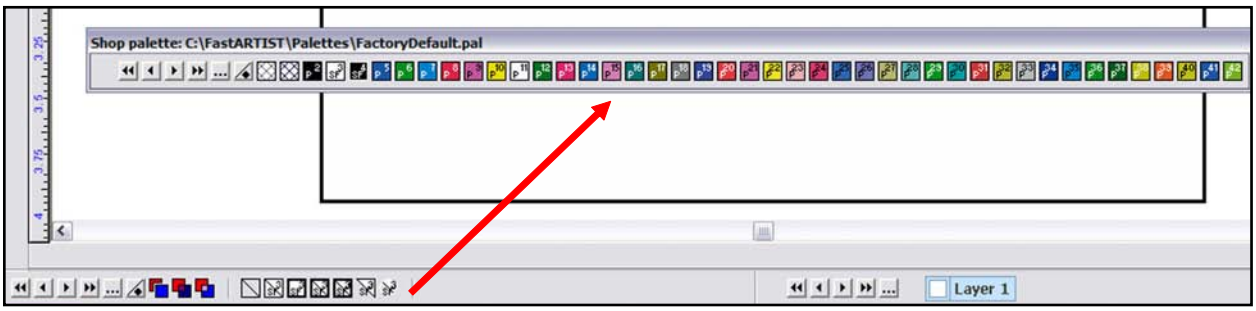
Working with Color Palettes

The *Line Style*, *Gradient* and *Pattern Fill* tools are available from the *Stroke and Fills Toolbar* and are needed to assign strokes and fills of a particular color to pieces of your design.



The default color palette of FastARTIST is the *Shop palette*. This lists the color plates available for use in the Workspace. Other palettes are provided as an aid for working with *Spot* colors, particularly with respect to foils. By default, color palettes are docked at the edges of the FastARTIST Workspace.

A palette may be "undocked" by *clicking-and-dragging* the palette to its new position. *Double-clicking* a palette will toggle its position between *docked* and *undocked*.

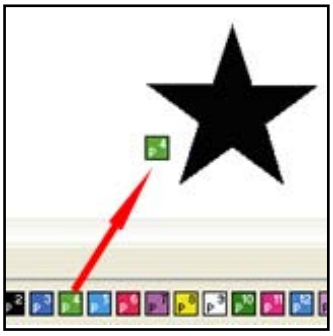


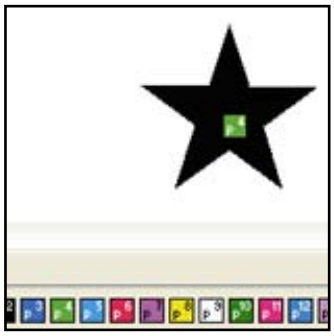
FastARTIST also has the ability to open standalone Manufacturer's palettes. Specific color plates may be dragged from a palette and added to the *Shop palette*. This allows you to quickly customize the *Shop palette* to include the most frequently used color plates.

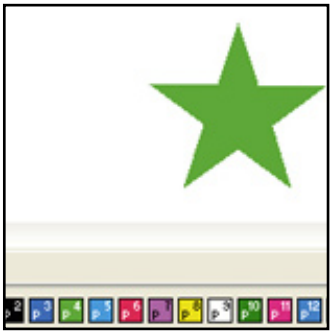
The Shop Palette

The default location of the *Shop palette* is along the bottom of the Workspace. It is commonly referred to as "the color palette" and it contains all of the color plates currently available for use within the Workspace.

Left-clicking a color plate will set the default *Fill* color for new shapes, as well as set the *Fill* color of any currently selected shapes. To change a shape's *Fill* color without changing the default *Fill*, *drag-and-drop* a color plate onto a shape.


Click-and-drag a color plate.


Release the mouse button when the cursor is over object.

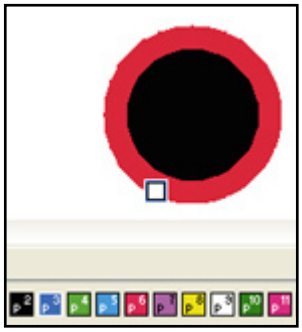

The shape changes to the color of the color plate.

IMPORTANT POINT

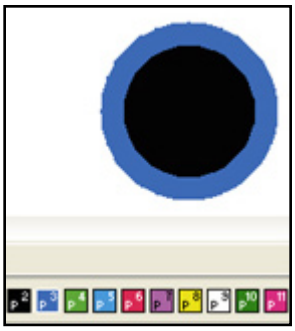
When the mouse button is released, it is the location of the cursor tip that determines where the new color will appear. In the example above, if the tip of the cursor arrow was touching the outer line of the star, then the Stroke *color would change to* ***Green*** *rather than the* Fill *color.*

Changing the Stroke Color

Right-clicking a color plate will set the default *Stroke color* for new shapes, as well as set the *Stroke color* of any currently selected shapes. You may also *drag-and-drop* color plates onto the outline of a shape to change the color. When holding the color plate over a shape, the dragged color plate will appear to be hollow, indicating that releasing the mouse button over that *Spot* will change the *Stroke color* of the shape.



Drag a color plate. When over the shape line style, the plate appears hollow.



Release the mouse button, and the line style color changes.

IMPORTANT POINT

By default, Workspace shapes have no Line Style. When the mouse is released, it is the location of the tip of the cursor that determines where the new color will appear. In the example on the previous page, if the tip of the cursor was touching the inner line of the star when the mouse was released, this would cause the Fill *color rather than the* Stroke *color to change to* **Blue**.

Changing the Fill Color of Grouped Shapes

If you *drag-and-drop* a color plate onto a collection of grouped shapes, that will set all of the shape *Fill*s to that color.

Hold down the *[Ctrl]* key to target a single shape within the group for that color.

Magenta plate is *dragged-and-dropped* into new location

Magenta plate is inserted in new location

Changing the Order of Color Plates

To change the order of the color plates within the *Shop palette*, any color may be dropped into a different location of the palette. The color will be inserted at the new location and colors to the right of that color will be shifted to the right.

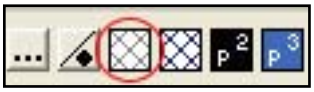
Modifier Keys and Color Plates

Additional functionality is available by holding the *[Shift], [Ctrl]* or *[Alt]* keys while clicking on a color plate. The following table summarizes these modifiers:

Action	Result
Left-click:	Set Fill color of current Object
Right-click:	Set line style color of current Object
[Shift] + Left-click:	Include all Objects of that Fill color in current selection
[Ctrl] + Left-click:	Disable the color plate. All Objects with that Fill color will appear as dashed outlines on the Workspace.
[Alt] + Left-click:	Disable all color plates, except for the plate that was clicked

Holding the [Ctrl] key and clicking on a palette color will toggle the "active" status of that color plate. Objects that have inactive colors will not be editable.

The Invisible Color Layer



The first two "colors" of the *Shop palette* are the *Invisible Colors*, which are used to indicate the absence of color for either an *Object Fill* or *Line Style*. *Invisible Colors* may be applied to Objects as a regular palette color. When applied as a *Fill color*, the Object will be reduced to the sum of its thick line attributes, which is useful for creating cutting paths. When applied as a *Stroke color*, the Object will effectively have no thick line attribute.

The Line/Fill Selector Button

The button prior to the *Invisible Colors* is the *Line/Fill* button which is used to toggle between *Fill Mode* and *Line Mode*.

If *Fill Mode* is selected, then clicking on a color plate will set the *Fill color* of a selected shape. *Right-clicking* on a color plate will set the *Stroke color*.

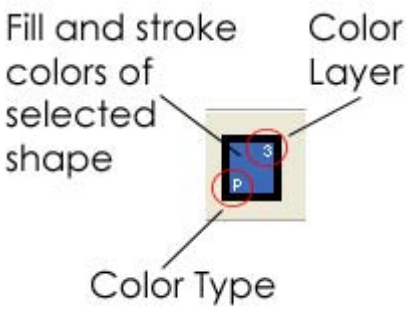
If *Line Mode* is selected, then left-clicking a color plate will set the *Stroke color* of a selected shape. *Right-clicking* on a color plate will set the *Fill color*.

The Halftone palette also has a *Line/Fill* button, which operates in similar fashion for *Knock Out*, *Overprint*, *Overlap*, *Primers* and *Halftones*.

Color Plate Labels

Each plate on the *Shop palette* is indexed according to the order of colors in the palette.

To hide these labels, uncheck *Show Layer Numbers* from the *Context Menu* or select the *Options* > *Palette* > *Show Layer Numbers*.

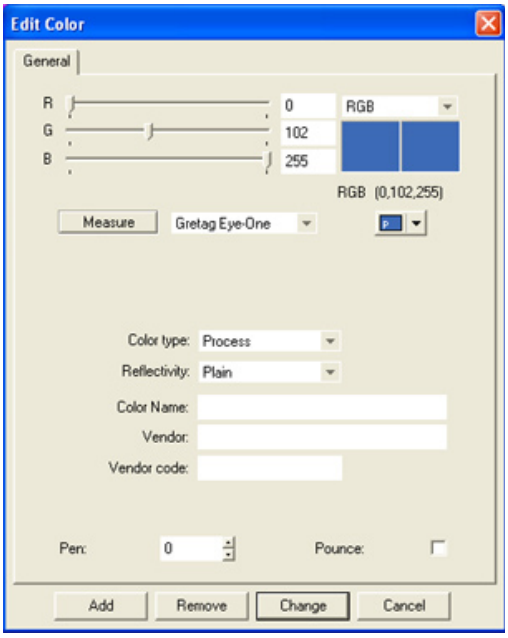


When an Object is selected, its color plate is shown on the SmartBar and the index number is visible within the plate.

In addition to its index number, each plate displays a letter that identifies its color type: *Process* (P), *Spot Foils* (SF), or *Spot Color* (SC). The letter designation is also visible from the SmartBar.

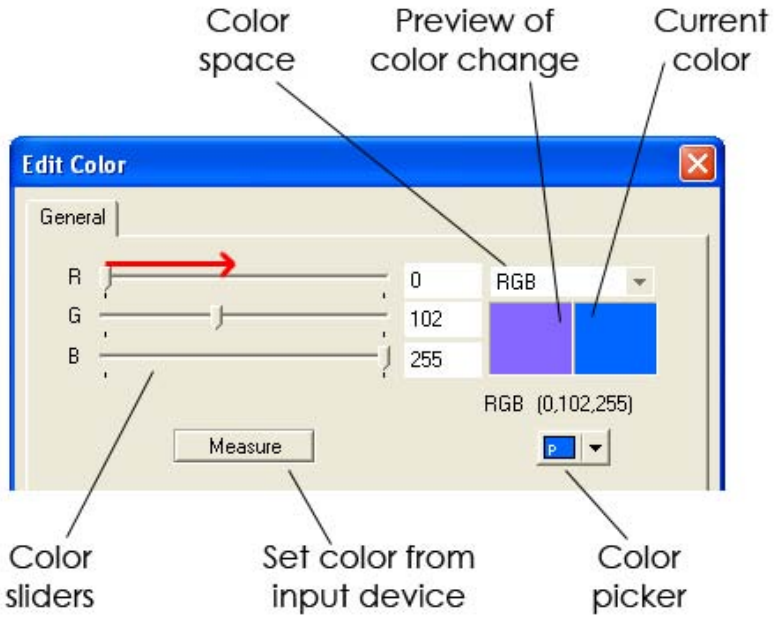
Edit Color Dialog

The *Edit Color* dialog is opened by *double-clicking* on a color plate in the *Shop palette*. The main controls of the *Edit Color* dialog are within the top third of the dialog. These controls are used to indicate the specific color value, its color space (RGB, CMYK, etc.) and how the color should appear on the Workspace. The lower two-thirds of the dialog has additional controls that are used to indicate the type of color (*Process* or *Spot*) and the manufacturer of this color.



Setting the Color Value

Sliders indicate a specific color value according to the *Color Space setting* (RGB, CMYK, etc.). You can change the *Color Value* by adjusting these sliders. You may also click on the *Measure* button to read a color from a color measurement device. Once a color value is adjusted, it will be previewed next to the current color. The RGB value of the new color will be shown below the preview.



Color Space

Color Space may be chosen from the *dropdown* list in the top right corner of the *Edit Color* dialog. The choice of *Color Space* will determine the method used to define the color.

RGB

RGB is the most common format used for additive color mixing. For example, a computer monitor is designed to emit **Red**, **Green** and **Blue** (RGB) light which combine to form the desired color.

CMY

Cyan, **Magenta**, and **Yellow** (CMY) is the format most commonly used when performing subtractive color mixing. This sort of mixing works on the principle that an external light source will be required to view the image.

CMYK

Cyan, **Magenta**, **Yellow** and **Black** (CMYK) is an extension of the CMY model, where equal portions of CMY colorants are replaced with a single portion of **Black** (K).

HLS

The *Hue*, *Lightness* and *Saturation* (HLS) model identifies colors according to the following parameters:

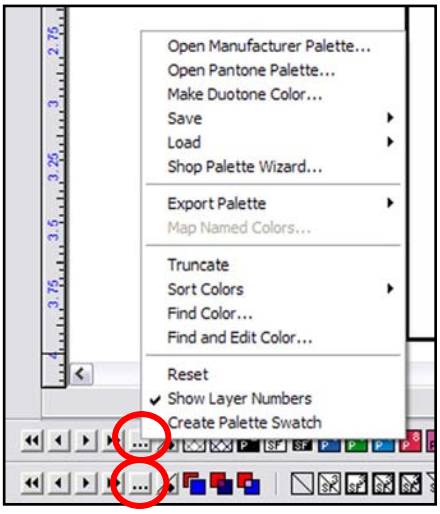
- *Hue* is the visual perception of a specific color, such as **Red**, **Orange**, **Violet** or **Green**.
- *Lightness* is the appearance of a color in terms of how White or **Black** it appears.
- *Saturation* is the perceived richness of a color in consideration of its intensity.

LAB

The L*a*b* *Color Space*, otherwise known as CIELAB, was promoted as a standard in 1976 by the International Commission on Illumination (CIE). The purpose of L*a*b* was to standardize the practice of predicting color differences, where previously there had been as least twenty alternative formulas in use to account for color differences in production workflows. The L*a*b* color space is used to maintain color consistency between devices used in color reproduction workflows. As such, the L*a*b* color space is a superset of both RGB and CMYK color spaces. The "L*" component refers to the Lightness. The "a*" component varies from **Green** to **Red** and the "b*" component varies from **Blue** to **Yellow**

Context Menus

With the exception of the *Manufacturer palettes*, all of the color palettes have context menus that are accessed by *right-clicking* within the bounds of the palette. Clicking on the "three dots" in the lower left quadrant of the Workspace will bring up the *Context Menu*.



Opening a Pantone Palette

Selecting *Open Pantone Palette* will open the *Pantone Library folder* where you can select from several Pantone palettes. These palettes are representative of the swatches available through the PANTONE MATCHING SYSTEM. Any of these palettes may be set as the default *Shop palette* or they may be opened as *Manufacturer palettes*. In FastARTIST, these colors are identified as *Spot Colors* (SC) and are defined in terms of their LAB color values for accurate color matching.

IMPORTANT POINT

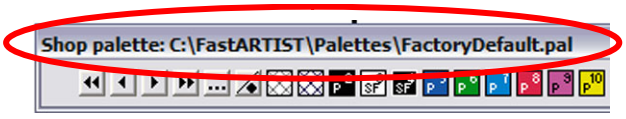
The first four colors in each palette are not Pantone colors. These are system colors that are kept in the FastARTIST palettes for your convenience. The system-specific colors are Invisible, Clear Color, RGB ***Black*** *and RGB Process White. Pantone colors are to the right of these system colors.*

Save

The *Save* command will save the current *Shop palette* settings. This will either be your current default palette or a palette that you have loaded using the *Context menu* > *Load* > *New* command or the *Options menu* > *Palette* > *Load* > *New*.

IMPORTANT POINT

When your software is initially installed, the Shop palette *is set to FactoryDefault.pal located in the main directory. This default palette will be automatically used when a new Workspace is opened. To change this default, use the* Context Menu Load > Set default *or the* Options > Palette > Load > Set default.



You can view the file path of the current *Shop palette* by *double-clicking* on an empty portion of the palette (between color plates). The palette will become a "floating" toolbar and the file path will be displayed in the toolbar name. *Double-click* again to dock the toolbar in its original position.

Save As

The *Save As* option it used to save the current *Shop palette* settings as a new PAL file. Saving the *Shop palette* is desirable after it has been customized with commonly used color plates. The saved palette may then be opened like a manufacturer palette or it may be set as the default palette that is loaded with each new FastARTIST Workspace.

Save Default on Exit

If the *Save default on exit* item is enabled (a checkmark should appear next to the item), then all changes to the Shop palette will be saved when FastARTIST is shut down.

IMPORTANT POINT

Creating a new FastARTIST Workspace will not cause palette settings to be saved. You must use the* Save As *command to save such settings before creating a new Workspace.

Load

During installation, a Palettes directory was created within the FastARTIST directory. The Palettes folder contains color palettes for a variety of manufacturers and each palette can be identified by its *.PAL file extension.

To load a FastARTIST color palette, choose *Load* > *New* from the *Context Menu* and the new palette will replace the current *Shop palette* configuration.

Merge is used to select a palette (.PAL) file and append it to the current *Shop palette*. Use this command to combine color plates of two-or-more commonly used palettes.

When FastARTIST is launched, a standard palette is loaded with a selection of commonly used process colors. Use *Set default* to specify an alternate palette to be loaded instead of the standard palette.

Shop Palette Wizard

The *Shop Palette Wizard* is a visual browsing tool used to create a custom palette by browsing and selecting from any of the palettes that were installed with FastARTIST. Colors from more than one palette may be combined with no restrictions on creating a palette containing colors from different manufacturers.

View Installed Palettes

During the FastARTIST installation, purchased modules will determine what color palettes are included. To confirm available palettes, choose *View Installed Palettes* from the *Context Menu*.

Export Palette

FastARTIST palettes (including *Spot* and *Duotone* colors) may be exported to either CorelDRAW or Adobe Illustrator.

Map Named Colors

The *Map Named Colors* feature is used to perform color substitutions when importing either AI or EPS files.

Truncate

Truncate will remove all color plates that are to the right of the currently selected color plate, with the exception of any colors that are currently being used on the Workspace.

Sort Colors

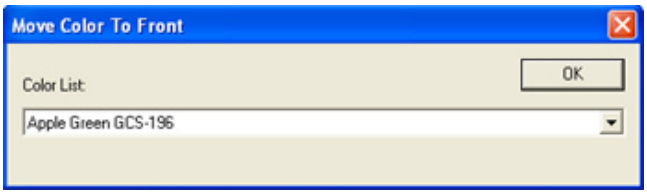
The *Sort Colors* menu can be used to rearrange the *Shop palette* color plates. Sorted colors will be moved to the front, which is the far-left of the *Shop palette*.

The table on the following page lists the various sort parameters available.

By Selected Objects	For the given selection of Objects, their color plates will be shifted to the left of the Shop palette.
By All Objects	Colors that are currently being used on the Workspace will be shifted to the left of the Shop palette.
By Active Colors	Active colors are shifted to the left, or front of the Shop palette, while inactive colors are shifted to the right or end of the Shop palette.
By Hue	All of the palette colors will be clustered according to color value.
Move Process Colors to Front	Shift all process colors to the front of the Shop palette.
Move Spot Foils to Front	Shift all *Spot* foils to the front of the Shop palette.
Move Duotone Colors to Front	Shift all *Duotone* colors to the front of the Shop palette.
Move Color to Front	Select from a list of colors, and move the selected color to the front of the Shop palette.

Find Color

Find Color is the same as *Move Color to Front*. The *Move Color to Front* dialog is used to select from an alphabetical list of *Spot Colors* within the *Shop palette*. click on *OK* to move the selected color to the front of the *Shop Palette*. Only *Spot Colors* are listed.



Find and Edit Color

The color selected from the alphabetical list of colors is located and opened for editing within the *Edit Color* dialog. Only *Spot Colors* are listed.

Reset

The *Reset* option will reload the *Shop palette*, discarding any changes that may have been made to the color plates. The default *Shop palette* will be loaded, unless it has been specified that a default palette should be loaded. Using the Reset option will allow you to return to the original palette colors without deleting Objects currently on the Workspace.

Show Layer Numbers

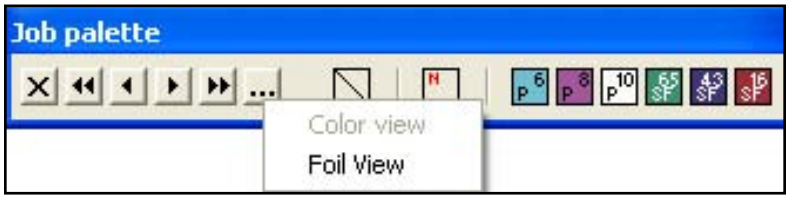
Layer Numbers refer to the *Shop palette* color plates, where each color plate is assigned both an index number, as well as a letter designation that indicates the correction mode for that color. If the *Layer Numbers* option is set to OFF, then the index numbers and letter designations are hidden.

Creating a Palette Swatch

The *Create Palette Swatch* is used to prepare a swatch for each color shown in the *Shop palette*. This tool places a palette swatch on the Workspace and the swatch can then be printed. This is a very useful tool to compare colors between printers, to compare color variances between monitor and printer or to match a customer's color request.

Job Palette

The *Job palette* shows colors currently being used on the Workspace. By default, the *Job palette* shows the *Color View*, which lists all the color plates, primer colors and halftones that are currently in use on the Workspace.



Selecting *Foil View* within the *Context Menu* will display only those *Spot Colors* or *Spot Foils* that are currently in use on the Workspace. This serves as a quick summary of the foils that will be used when rendering the job.

Performing a Global Color Substitution

The *Job palette* can be used to substitute one color for another and this substitution will take place throughout the entire Workspace.

For example, suppose that there are several Red shapes on the Workspace, which need to be changed to Orange. From the *Shop palette*, left-click and drag the orange color. (The cursor will appear to be dragging the color plate.) Move the cursor to the *Job palette* and position the tip of the cursor over the red color. Release the left mouse button, and all red shapes will now become orange.

Halftone Palette

The *Halftone Palette* is used to apply *Knock Out*, *Overprint*, *Overlap*, *Underbase* and *Halftone properties* to Workspace shapes. Since a halftone dot is not needed when printing to an inkjet printer, the halftone feature has been disabled, BUT this palette is still called the Halftone Palette. The main purpose of this palette is to apply an underbase to an image.

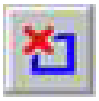
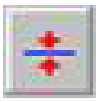
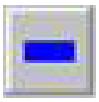
The Line/Fill Selector Button

The *Line/Fill Selector* button is used to toggle between *Fill Mode* and *Line Mode*.

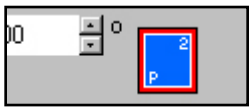
If the *Fill Mode* is selected, then left-clicking a halftone or primer will apply it to the *Fill* of a selected shape. If the *Line Mode* is selected, then left-clicking a halftone or primer will apply it to the line style of a selected shape.

Line Style Tool

The table below describes the different line styles that are available to work with.

	**No line**	Removes any previously applied line style.
	**Hair Line**	Creates a 1 pixel wide line. This line cannot be cut, but it may be applied as a line stroke.
	**Thick Line**	This is initially zero, so the line will not be visible until the Thickness field is incremented.

The *Line Style Tool* is used to apply a "thick line" effect to Workspace shapes.



When a shape is selected, the color of its line style is visible in the SmartBar. For example, the screenshot of the SmartBar shows that the current Fill color is blue (process color plate 2). The red outline around the blue square indicates that the line style color is red.

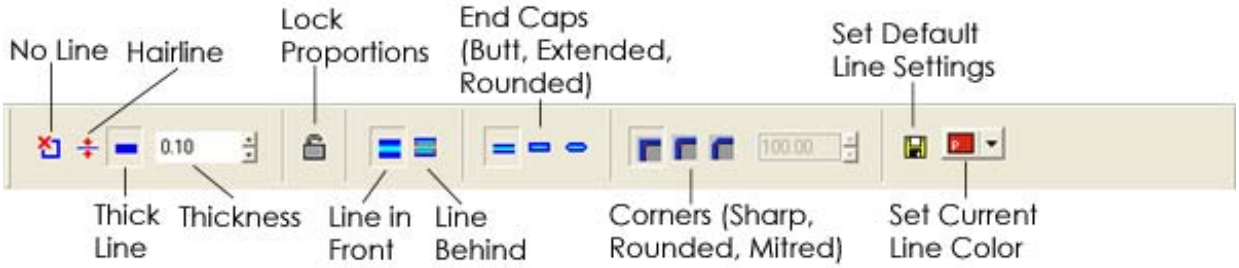
To change the line style color for a shape, right-click a color plate in the Shop palette. Alternatively, you can drag and drop a color plate onto the outline of a shape. The color will appear where the tip of the cursor is located when the mouse is released. If the mouse is released when the tip of the cursor is within the shape, then the *Fill Color* will change.

IMPORTANT POINT

In cases where Workspace shapes should have thick Line Styles*, but none are visible, verify that the* Show Line Style *option has been selected in the View menu.*

To add a *Line Style* to a selected shape, choose *Line Style* from the *Stroke and Fill Tools* flyout.

The SmartBar controls will appear similar to the following:



At the far left of the SmartBar, the type of line style may then be selected. The available line styles are:

At the far right of the SmartBar, the color picker may be used to select the *Line Style* color. In addition, clicking on a Shop palette color will also change the *Line Style* color.

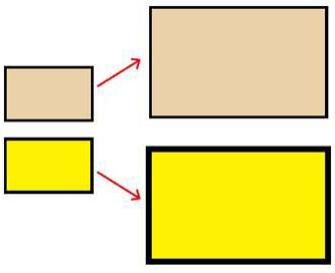
For the *Thick Line* attribute, parameters of the line may be set from the SmartBar.

Click the *Set Default Line Style* button to store the current SmartBar settings for reuse. However, line color will ***not*** be stored as part of this default.

Lock Proportions

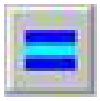
If the *Lock Proportions* option is enabled, scaling the shape will cause the stroke thickness to be scaled in proportion.

For example, the two rectangles have been scaled by 200%. However, the **Yellow** shape has a stroke with *Lock Proportions* enabled, therefore its stroke is also been scaled by 200%.

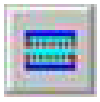


Line Above

By default, a thick line will actually overlap the contour of the shape. If the *Line In Front* option is enabled, then the line style will partially obscure the shape. Alternatively, the *Line Behind* option will cause the line style to be partially obscured by the shape.



Line In Front The line style will appear as if it were above the shape.



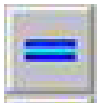
Line Behind The line style will appear as if it were below the shape.

Star with line behind the shape.

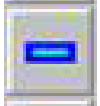
Star with line in front. Note that the star shape is partially obscured by the line style.

End Styles

There are three different line styles, which are used to modify the termination of open paths:



Butt End Cap The line style will extend only to the end of the open path.



Extended End Cap Create square end caps as terminators for an open path.

Round End Cap Perform rounding of open paths.

Corner Styles

There are three corner styles that will effect shapes with cornered edges.

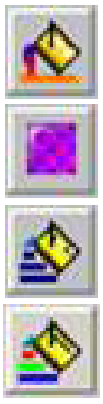
Sharp Corner Corners retain sharp angles as per the base Object.

Round Corner Corners are rounded.

Mitre Corner For a sharp corner of the original Object, the corner formed by the line style may be quite steep. Use the *Mitre Amount* to clip the line style according to a percentage of the line thickness.

Gradients and Pattern Fills

Gradient and *Pattern Fill*s are applied to *Object Fill*s from the *Stroke and Fill Tools* flyout.



Gradient Fills Create a process color *Fill*

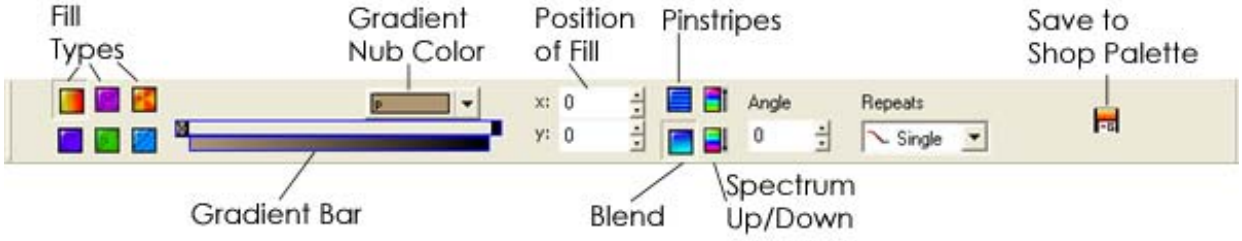
Pattern Fills Create a process color *Fill* effect by tiling a bitmap pattern

Spot Gradient Fills Create *Fill* effects only using one or two Spot colors

Multi Spot Gradient Fill Create *Fill* effects using one or more Spot colors

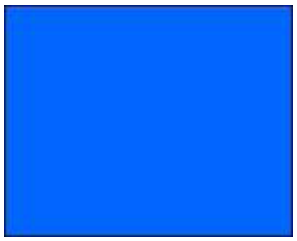
Gradient Fills

The *Gradient Fill* styles are selected at the far left of the SmartBar.

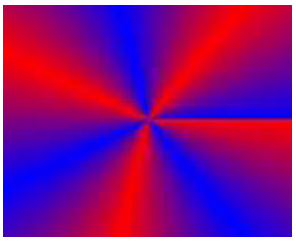


Examples of the *Fills* are as follows:

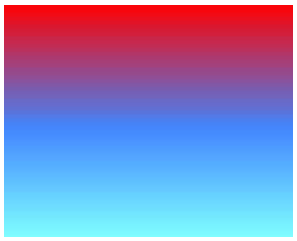
Uniform Fill



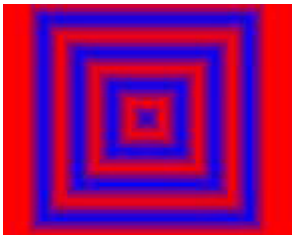
Conical Fill



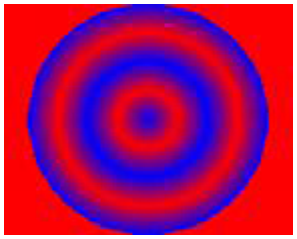
Linear Fill



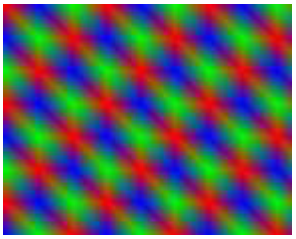
Square Fill



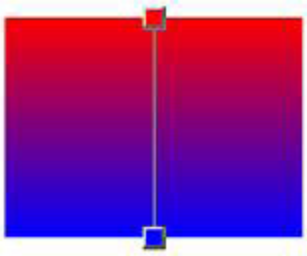
Radial Fill



Triangle Fill



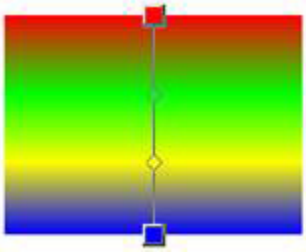
Choosing a Fill Style



When a *Fill* style is selected, color nubs will appear around the Object on the Workspace.

The placement of color nubs will depend on the given style. The initial color nubs will also be represented in the *Gradient Bar*.

The two end nubs of the *Gradient Bar* are fixed, but *double-clicking* within the bar will add a color nub.



The new nubs will also be shown on the Workspace.

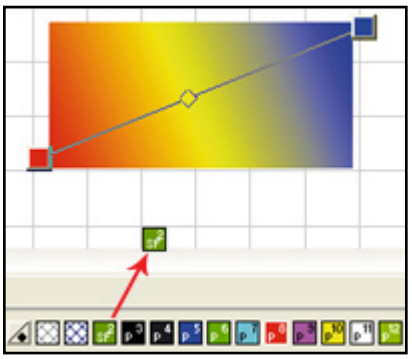
A line joins the two initial color nubs, which will indicate valid regions for creating color nubs. *Double-clicking* within this valid region will create a color nub.

Changing Nub Colors

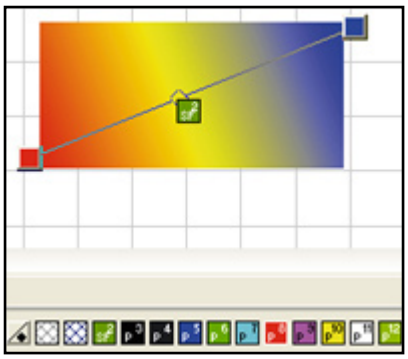
On either the *Gradient Bar* or the Workspace, a color nub may be clicked to set it as the focus. Once designated, the nub color may be changed by clicking on the color picker. The color picker is located above the *Gradient Bar*.

Dragging Color Plates

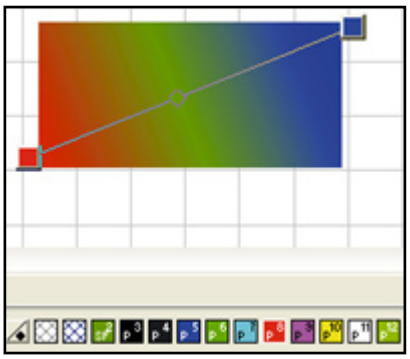
Color plates may be dragged from the *Shop palette* and dropped onto a color nub. The color nub will then be assigned the given color.



Dragging a color plate from the *Shop palette*



Hold the color plate over the existing color nub, and then release the mouse button.



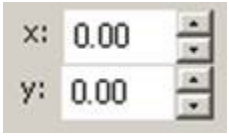
The color nub is assigned the new color.

If a plate is dropped onto an area of the shape that does not already contain a color nub, then a new color nub will be created.

Deleting Color Nubs

On either the *Gradient Bar* or the Workspace, *control-clicking* a color nub will delete that nub. To clear all color nubs, click on the *Clear Nubs* button.

Horizontal and Vertical Position



By default, the *Gradient Fill* is placed at the center of the Object. The Horizontal and Vertical Position fields may be used to place the gradient *Fill*.

Gradient Angle

Dragging the color nubs may be used to adjust the angle of the *Fill*. The Angle field on the dialog bar may also be used.

Repeats

The *Fill* can be applied with either as a *Single* or repeating *Sawtooth* or *Wave* pattern.

Single Render the *Fill* from the initial color through to the final color.

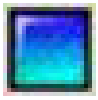
Sawtooth Render the transition from the initial color through to the final color, which then repeat the specified number of times. For example, five colors with 4 repeats would display shades in the following order: 1-2-3-4-5, 1-2-3-4-5, 1-2-3-4-5 and 1-2-3-4-5.

Wave Render the transition from the initial color through to the final color, and then from the final color through (in reverse order) to the initial color. For example, five colors with 2 repeats would display shades in the following order: 1-2-3-4-5, 5-4-3-2-1.

Pinstripe versus Blend

By default, *Fill*s have a *Blend style*.

The Pinstripe style will create an abrupt transition between each *Fill* color.



Using a Blend style will create a gradual transition between each *Fill* color.

Spectrum Up and Down

By default, a gradient *Fill* between two colors will only have progressive shades between those two colors. By doing so, the intervening colors of the spectrum are ignored. By clicking on either the *Spectrum Up* or *Spectrum Down* buttons, the blend of colors will include these intervening spectrum colors.

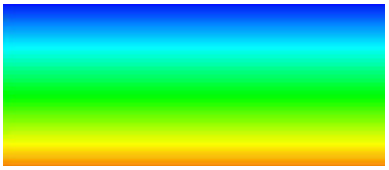
For example, consider the memory aid ROYGBIV, which is short for **Red**, **Orange**, **Yellow**, **Green**, **Blue**, **Indigo** and **Violet**. If the gradient *Fill* is initially between **Orange** and **Blue**, then the following is true:

Spectrum Up Orange, Red, Violet, Blue

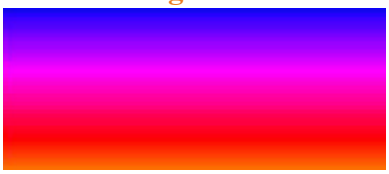
Spectrum Down Orange, Yellow, Green, Blue

Spectrum Down
Orange to Blue

Spectrum Down
Orange to Blue



Spectrum Up
Orange to Blue

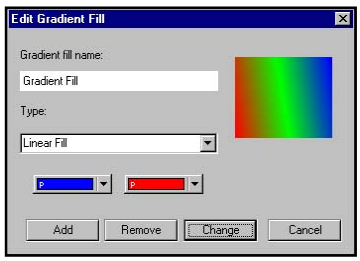


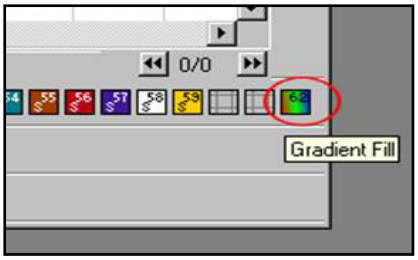
Save Fill

At the far right of the SmartBar is the *Save Fill* button. When this button is clicked, the *Gradient Fill* will be saved as a new color plate and appended to the end of the *Shop palette*.

The *Gradient Fill* plate may then be applied like a regular palette color.

By default, the name of the plate will be *Gradient Fill*. If the *Gradient Fill* plate is *double-clicked*, then the *Edit Gradient Fill* dialog will open.





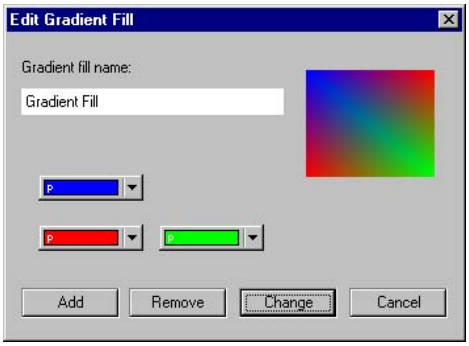
The *Edit Gradient Fill* dialog may then be used to rename the *Fill*, choose different colors for the *Fill*, or change the type of *Fill*.

IMPORTANT POINT

The Triangle Fill type is not available from the dropdown *list. The Triangle Gradient Fill has a different Edit Gradient Fill dialog that is incompatible with the other gradient Fills.*

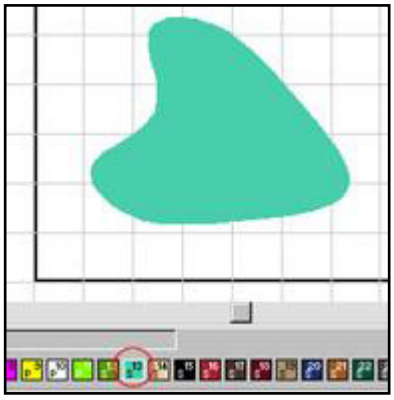
Editing a Triangle Gradient Fill

For a *Triangle Gradient Fill*, the *Edit Gradient Fill* dialog behaves slightly differently than for the other *Fill*s. However, the only real difference is that there are three color pickers, which are used to select the *Fill* colors.

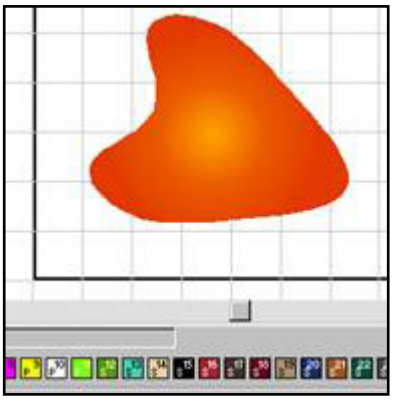


Gradient Fills and Color Layers

When a shape is applied with a *Gradient Fill*, that shape will be considered to remain on its original color plate layer, even though the shape will be rendered using the indicated *Fill*. If the *Instant Replay* window is open, then the *Fill* of the selected shape will be a *Special Fill* to indicate that it has a *Spot Gradient Fill*.

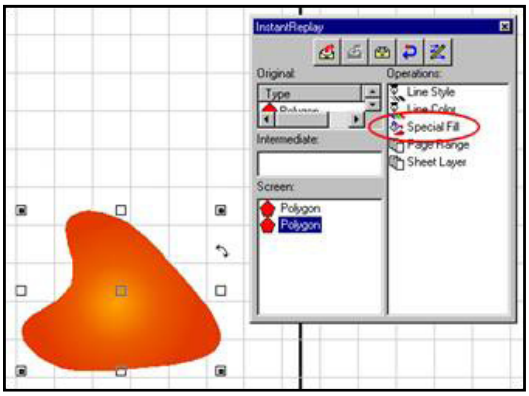


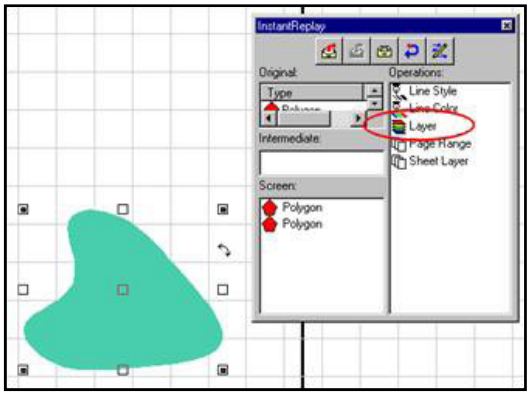
Original shape with an aqua Fill (plate layer 13)



The same shape with a Spot gradient Fill. This shape is considered to be on layer 13.

If the *Special Fill* is selected and then the *[Del]* key is pressed, the *Gradient Fill* will be deleted and the shape will have the *Fill* of its original layer color.

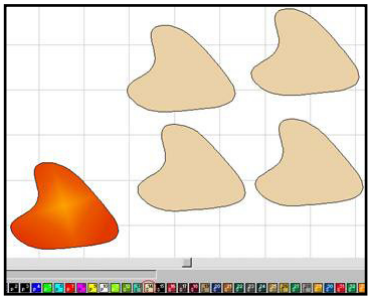


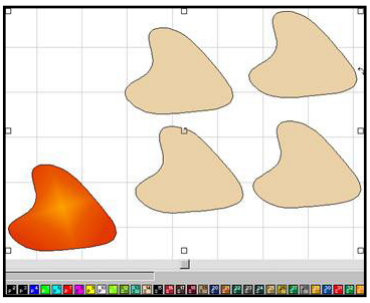


Selecting Shapes by Their Color

As previously mentioned, *Shift-clicking* on a color plate in the *Shop palette* will select all shapes that have that color *Fill*. However, this also includes *Gradient Fill* shapes that originally had that color *Fill*.

For example, consider five shapes that had a Beige color applied and where one shape was has also had a *Spot Gradient Fill* applied.

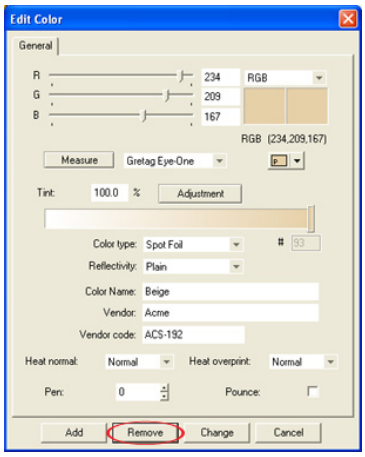


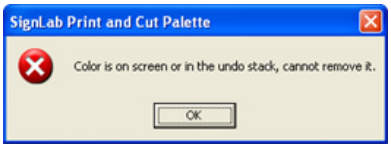


Later, it was decided that the Beige shapes should be selected. From the *Shop palette*, the Beige color plate was *Shift-clicked*, resulting in all of the Beige shapes being selected. The *Gradient Fill* shape will also become part of the selection, since it is considered to be on the Beige color layer.

Deleting a Color Layer

If the Beige shapes from the previous example have been deleted, and the *Gradient Fill* shape is the only remaining shape on the Workspace, *double-clicking* the Beige color plate will cause the *Edit Color* dialog to open. If the *Remove* button is now clicked, then a warning dialog will prevent the color plate from being removed.





The Beige color plate cannot be removed because the gradient *Fill* shape uses Beige as its original layer color. To delete the color plate, the gradient *Fill* shape must be assigned a different (non-gradient) *Fill* color from the *Shop palette*.

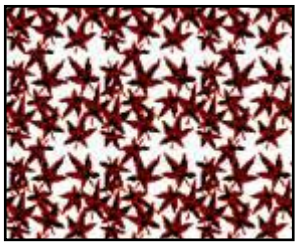
Gradient Fills and Welds

When creating a design that includes gradient *Fill*s, it is recommended that detailed editing be postponed until after all welds have been completed. The problem is that when shapes are welded, their original color layers are reasserted, thereby losing any gradient *Fill*s.

For each shape that will eventually be applied with a *Gradient Fill*, assign a unique layer color instead. This will allow such shapes to remain distinct from the other Workspace shapes. After all welds have been completed, the Gradient Fills may be applied to the unique color shapes. If necessary, the unique color shapes may be selected by *Shift-clicking* their color plate on the *Job palette*.

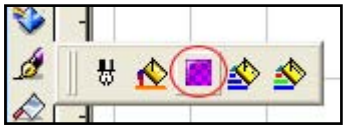
Pattern Fills

Pattern Fills use a Bitmap pattern as a template, which is then tiled over the surface of a shape.

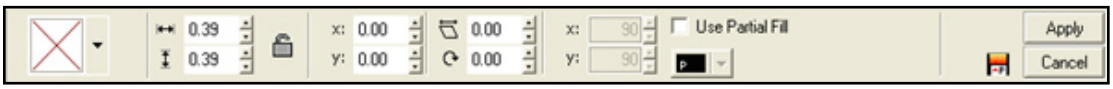


Bitmap pattern of leaves tiled over a rectangle shape.

Pattern Fills are accessible from the *Stroke and Fill Tools* flyout.



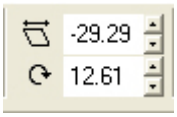
When editing Pattern Fills, the SmartBar is similar to the following:



At the far left of the SmartBar is the Select Pattern Bitmap button. click on this button to choose the Bitmap that will be used as the Fill.

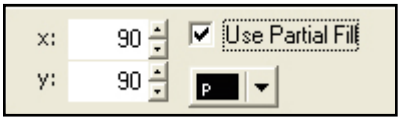
Cell Width and *Cell Height* indicate the dimension of one tile.

The Bitmap will be scaled to cover the entire tile. The *X* and *Y* coordinates indicate the placement of the initial tile.



The *Skew* field is useful for creating a slanted effect for the Bitmap. The *Rotate* field indicates the rotation that is applied to the Bitmap tiles.

If *Use Partial Fill* is checked, then a border will be formed about each tile. The border will be a percentage of the tile size, and the border color is selected from the color picker.



Color Swatches

Color swatches are used to reference the hues that a given printer can produce. The precise hue will depend upon the operating environment of the printer, such as humidity and ambient temperature. In addition, hues are affected by the type of inks and media that are loaded into the printer. After color swatches are printed, store the printed sheets in a binder for quick reference. If there are any changes to the printer operating conditions (i.e. new type of media, different manufacturer of inks, etc.), it is worthwhile to create a new set of printed color swatches.

There are two tools for creating color swatches: Under the *File* menu, there are the *Color Swatches* and in the *Context Menu* there is the *Create Palette Swatch* tool.

The *Color Swatches* tool is used to create standard process color swatches for RGB, CMY or CMYK color values. The *Spot Swatches* tool is used to create *Duotone* swatches using *Spot Foils* that are in the *Shop palette*. The *Create Palette Swatch* tool is used to prepare a swatch for each color that is in the *Shop palette*.

Creating a Set of Process Color Swatches

From the *File* menu, choose the *Color Swatches* tool. In the *Color Swatches* dialog:

- Use the *Standard* option to create preset swatches
- Use *Customization* to create a custom set of swatches

Standard RGB Swatches

From the *File* menu, select *Color Swatches*. Select *Standard*, select *RGB* and click on *OK*.

The standard *RGB* swatches are comprised of thirteen sets of swatches, where each set has thirteen rows and thirteen columns. The rows indicate the amount of **Red**, which varies top-down from 255- 0. The columns indicate the amount of **Green**, which varies left-to-right from 255- 0. Each set of swatches indicate the amount of **Blue**, where each set varies left-to-right from 255- 0.

Standard CMY Swatches

From the *File* menu, select *Color Swatches*. Select *Standard*, *CMY* and click on *OK*.
The *Standard CMY* swatches vary from 0 to 100% of each colorant. The rows indicate the percentage of **Cyan**, which varies top-down from 0 to 100. The columns indicate the amount of **Magenta**, which varies left-to-right from 0 to 100. Each set of swatches indicate the amount of **Yellow**, where each set varies left-to-right from 0 to 100. Above each set of swatches is a swatch representing the given percentage of Yellow.

Standard CMYK Swatches

From the *File* menu, select *Color Swatches*. Select *Standard*, *CMYK* and click on *OK*. The standard *CMYK* swatches are the same as the *CMY* swatches, except that **Black** is introduced as a fourth colorant. Each swatch is quartered, with 5% **Black** in the top-left, 10% Black in the top-right, 20% Black in the bottom-left and 30% **Black** in the bottom right of each swatch.

Customized Swatches

As an alternative to using the standard swatches, a custom set of swatches may be generated. From the *File* menu, select *Color Swatches*. Select *Customization* and click on *OK*. The swatch parameters are set from the SmartBar. At the far left of the SmartBar, the color model may be set as either RGB or CMYK. If *RGB* colors are used, then each primary will vary from 0 to 255. If *CMYK* colors are used, then each primary (as well as black) will vary from 0% to 100%.

Grid Size

The size of the grid can be Small, Medium or Large. The larger the grid, the more color swatches that will be created.

Axis Colors

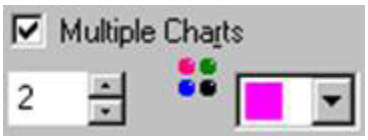
The choice of axis colors will determine how the color swatches are arranged. For example, if the horizontal axis is yellow, then the yellow content of the patches will increase from left-to-right. The amount of the increase is determined by the Percent change between swatches.

Percent Change between Swatches

This percentage indicates the hue shift that will occur between successive patches. This value must be positive with small values requiring more swatches to complete the grid.

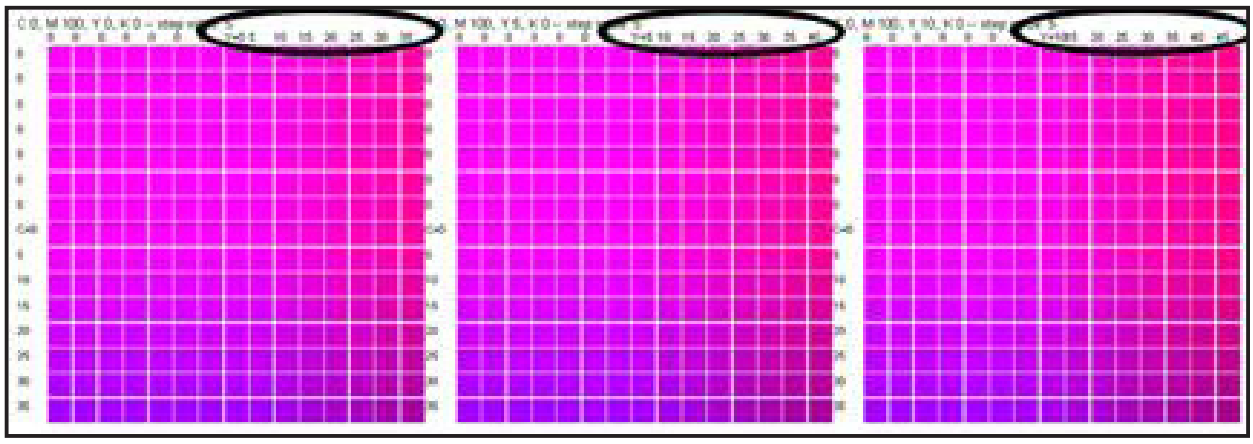
Multiple Charts

More than one chart may be created at once, where successive charts will vary according to the chart axis color. For example, if the horizontal axis is yellow and the chart axis is also yellow, then each successive chart will have its horizontal axis shifted by an additional percent change between swatches.



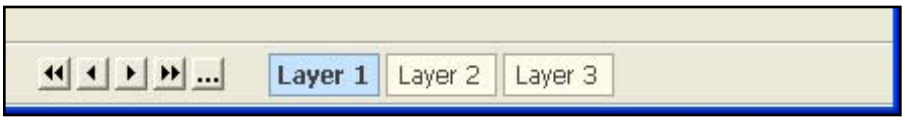
This is shown in the following SmartBar settings. Three charts will be created, where the percent change is 5%.

For the resulting charts, notice that the horizontal axis is shifted for each successive chart.



Placing Objects on Layers

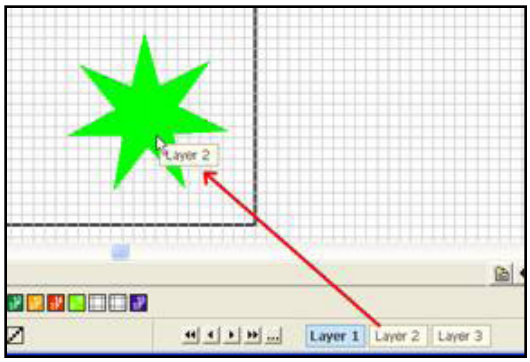
By default, shapes are placed on sheet layer 1. To add new layers, *double-click* Layer 1 to open the *Sheet Layer* dialog. Select *Add* to add a new layer.



The following screen shot shows a Workspace where there are three layers present.

For selected Objects, clicking on a layer plate will place those Objects on that layer. An Object may also be assigned to a layer by clicking on and dragging the layer plate from the *Sheet layer* palette.

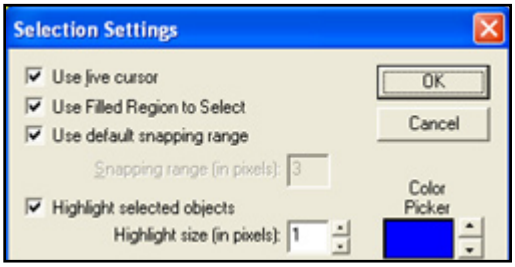
A small square will appear to be dragged by the cursor. Hold the dragged square over a Workspace shape and then release the mouse button. That shape will now belong to the given layer.



Selecting All Shapes on a Layer

All shapes on a given sheet layer may be selected by holding the *[Shift]* key and left-clicking the layer plate. The shapes will be added to the current selection.

Highlight Selected Objects



The *Highlight Selected Objects* option is used to draw a highlight border around selected Objects. Shapes that are on a *Cut Only* layer will be given a red highlight. For shapes that are on a *Print* and *Cut* layer, you can select the color for the highlight. These highlights are intended as a quick visual cue to confirm the nature of a given shape.

To enable or disable these highlights, select *Options > FastARTIST Setup > Selection Tool Settings,* from the ***Options*** *Pull-down Menu* and check or uncheck the *Highlight Selected Objects* option. The *Highlight Size* field may be used to make the highlight more prominent. Select a color from the *Color Picker* for the *Print* and *Cut Layer* highlights.

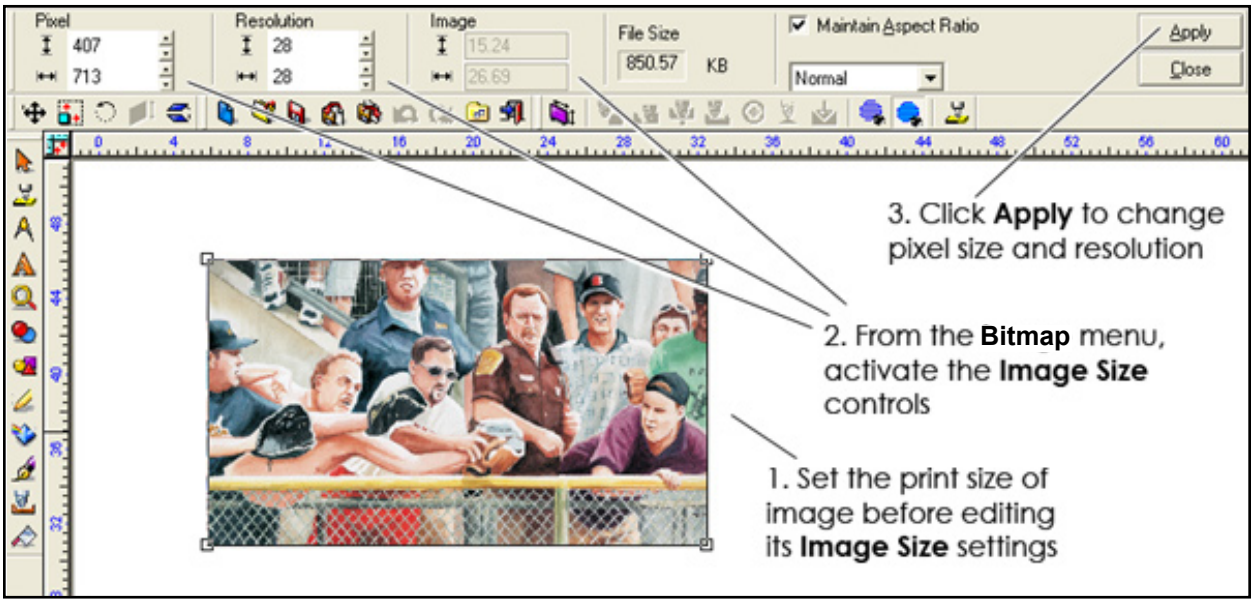
Chapter 7

Working with Bitmap Images

Image Properties

Image Size

To obtain professional looking prints, it is important to use high quality images with a resolution of 150 to 300 DPI (dots per inch). Under ***Image Size*** from the ***Bitmap*** *Pull-down Menu*, you can find the size and resolution information for a selected image. This information will be displayed within the SmartBar, as follows:



Pixel refers to the on-screen image size in pixels. *Resolution* is listed in pixels per inch (i.e., like DPI). ***Image*** reflects the actual size at which the image will be printed, expressed in the current ruler units. Image dimensions are not editable within the *Image Size* edit mode. You must use the *Select* state to change the size of the image. *File Size* indicates the total amount of hard drive space the image will require when saved. Please be careful when creating large, high resolution images, the file size can quickly become excessive.

The ***Maintain Aspect Ratio*** preference is applied when changing *Pixel Dimensions* or *Resolution*. Below the ***Maintain Aspect Ratio*** checkbox is the ***Sampling Method*** Drop-down list. This indicates the resampling method that will be used when changing the *Pixel Dimension*

or *Resolution*. Resampling involves changing the pixel dimensions, and thus the display size, of an image. The available options are:

- **Normal:** The normal option will resize the image normally, by adjusting the pixel dimensions and/or the resolution.
- **Resample:** Resample option uses interpolation and averaging to produce a higher quality image.
- **Bicubic:** The Bicubic option uses Bicubic interpolation and averaging to produce a higher quality image, but is slower than resample.

IMPORTANT POINT

Many of the options available within Bitmap *menu can be applied to Vector images without converting them to Bitmaps. Tools such as* Hue and Saturation *will transform a Vector image in the same manner as it would a Bitmap. However, most of filters require you first convert a Vector image into a Bitmap with a* Clipping Path *in order to perform the adjustment. In these instances you will be asked to enter a resolution for use when creating the Bitmap.*

Transforming an Image

Render to Bitmap

The ***Render to Bitmap*** feature in the *Transform* menu converts any selected vector or Bitmap Object. The possible color depths are as follows:

Color Depth	Description
Monochrome	Convert the selected Objects to Black and White Bitmaps
16 Gray levels	Convert the selected Objects to grayscale Bitmaps with 16 shades
256 Gray levels	Converts the selected Objects to grayscale Bitmaps with 256 shades of gray
16 Colors	Convert the selected Objects to 4-bit color Bitmaps with 16 colors
256 Colors	Convert the selected Objects to 8-bit color Bitmaps with 256 colors
Full Color	Convert the selected Objects to 24-bit color Bitmaps with millions of colors

The *Resolution* of Bitmaps are specified in Dots per Inch (DPI). The default resolution is 72 DPI.

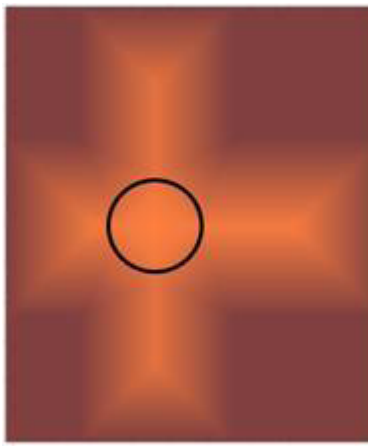
Render Contour Bitmap

The ***Render Contour Bitmap*** feature is used to create three-dimensional chiselled or bevelled patterns using process colors. When a shape varies in thickness, the effect will be adjusted to maintain consistent proportions throughout the shape.

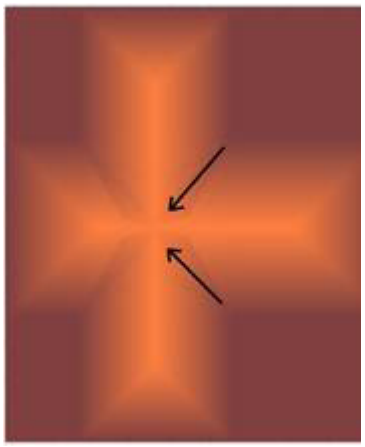
When the ***Render Contour Bitmap*** command is chosen, the ***Set Bitmap DPI*** dialog will open. The DPI field indicates the "Dots per Inch" of the Bitmap that will be produced. A high DPI setting will produce a higher resolution Bitmap (i.e. less aliasing) but a larger file size.

The ***Constant Slope*** option will cause the chisel/bevel effect to reach its maximum height/depth at the same rate. For areas of the Bitmap that have a short distance between the edge and center, the Bitmap will tend to plateau. The ***Constant Height*** option will cause the chisel/bevel effect to dip/peak along the centerline of the shape. The ***Direction*** option creates a chiselled appearance that is effective with lettering.

Clicking on *OK* will close the *Set Bitmap DPI* dialog and a preview of the Bitmap will be displayed. In the SmartBar, the gradient bar will indicate the range of shades used to construct the chisel/bevel effect. The left edge of the gradient bar indicates the color that will be present along the outer edges of the shape. The right edge of the ***Gradient Bar*** indicates the color that will be present at the center of the shape.



Using the *Constant Slope* setting, a plateau is produced at the intersection between two rectangles.



Using the *Constant Height* setting, the slopes are varied so that a peak is produced at the maximum height.

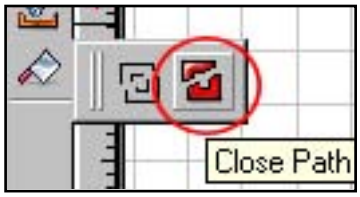
Clicking on either the left- or right-edge of the ***Gradient Bar*** will select that edge and the color picker may then be used to change the color.

By *double-clicking* within the *Gradient Bar*, a color nub will be created. Initially, the color nub will be assigned the shade of color that was present where the *Gradient Bar* was clicked. This color may be changed by utilizing the *Color Picker*.

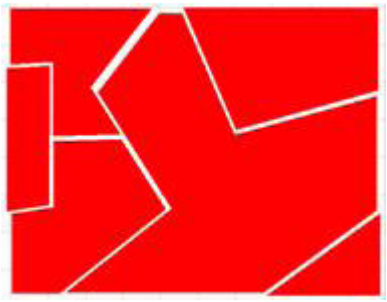
Note: To remove a color nub, hold the *[Ctrl]* key and then Left-click the nub.

Subdividing Shapes

Before converting a shape into a contour Bitmap, the ***Ginsu Knife*** tool may be used to subdivide the shape.



For example, suppose that the tool has been used to subdivide a rectangle shape into several small pieces. Using the Select tool, resize and nudge the pieces to create a small gap between each piece. When ready, select all of the pieces and apply a ***Render Contour Bitmap*** operation. A chisel/bevel effect will be created for each piece, which is then combined into the final Bitmap. If a small gap is not created between the pieces, then the ***Render Contour Bitmap*** feature will create a Bitmap that shows no separation between the adjoining shapes.

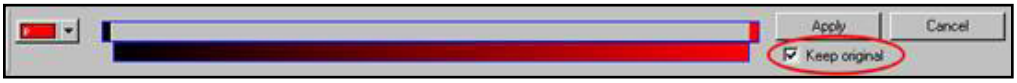


Rectangle shape that has been subdivided using the *Ginsu* Knife tool.

Select the pieces and apply a Render Contour Bitmap operation.

Clipping the Edges of a Bitmap

Once a contour Bitmap has been created, the original shape may be used to clip the Bitmap. When editing the contour Bitmap, enable the *Keep Original* option at the far-right of the SmartBar.



After clicking on the ***Apply*** button, return to the *Select* mode.

Click the Bitmap to make it the "current selection." From the *Arrange* menu, select *Order* and *To Back*. The Bitmap will now be behind the original shape. Drag a selection marquee around both the Bitmap and shape to select both.
Under the *Arrange* menu, choose *Clipping*. The Bitmap will now be clipped according to the contour of the original shape.

Render Multitone Bitmap

The ***Render Multitone Bitmap*** feature is used to create three-dimensional chiselled or bevelled patterns by varying the tints of up to four spot colors. Process colors may also be selected, but the ***Render Contour Bitmap*** feature is better suited for working with spot colors.

At the far-left of the SmartBar, the ***Number of Tones*** Drop-down list indicates the number of spot colors that will be used in the *Multitone* Bitmap. Up to four different spot colors may be selected.

For the ***Monotone*** option, only one color picker will be available in the SmartBar.

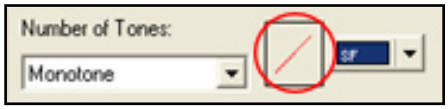
The ***Quadtone*** option will cause four color pickers to be available.

Beneath the color pickers is the ***Gradient Bar***, which is used to indicate the range of tints that will be applied as the *Chisel/Bevel Effect*. The left-hand end of the ***Gradient Bar*** represents tints that will be applied nearer the edges of the shape. The right-hand end of the ***Gradient Bar*** represents tints that will be applied nearer the center of the shape. If more than one color has been chosen, then the ***Gradient Bar*** will show their combined tints.

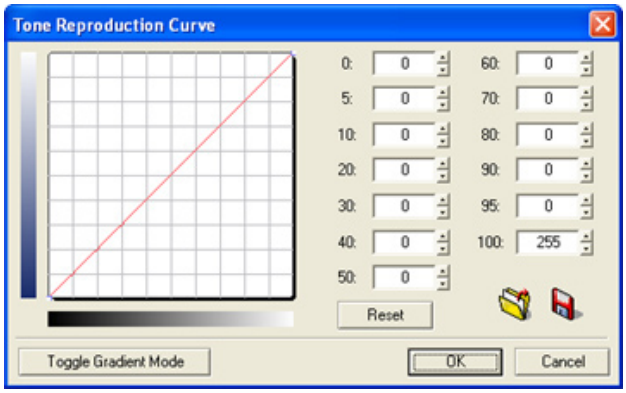
If dark tints are arranged at the left-hand end of the ***Gradient Bar*** and light tints are arranged to the right, then a raised bevel effect will be created. If light tints are arranged at the left end of the ***Gradient Bar*** and dark tints are arranged to the right, then a chisel effect will be created.

Next to each color picker is a graph button that indicates the distribution of tints for the color.

Click the graph button to open the ***Tone Reproduction Curve*** dialog, which is used to edit the distribution of tints (of that color) in the chisel/bevel effect. By default, the curve will be a straight line from the bottom-left (250) to the top-right (0) of the graph.

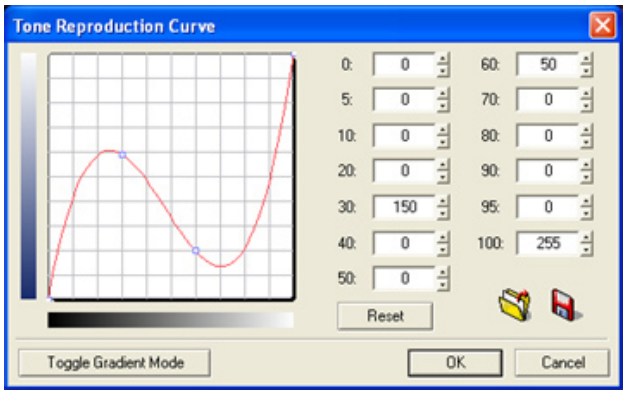


From left-to-right, the graph is arranged into ten intervals. Clicking within the graph will create a node at the given interval which may be dragged up or down to vary the tint. As a node is dragged, the *Curve* values will be automatically adjusted to maintain a smooth gradation of tints.

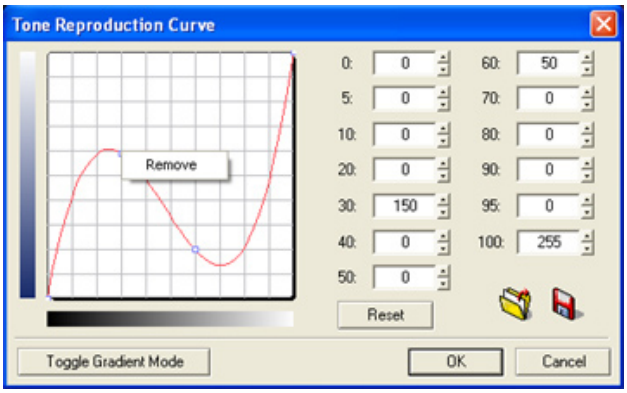


For example, this screenshot shows two nodes that have been created at the 3rd and 6th intervals. The 3rd interval has been set to 150 and the 6th interval has been set to 50.

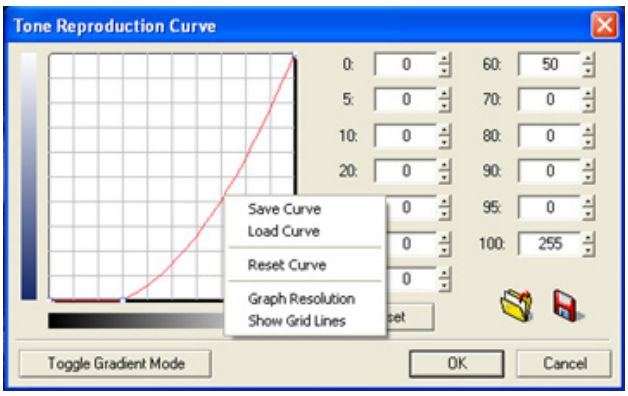
When varying the tint at a given interval, the remainder of the curve will be automatically adjusted to provide a smooth gradation.



To remove a node, hold the cursor over the node and *right-click*. Choose ***Remove*** from the context menu and the node will be deleted.



Right-clicking within any other part of the graph will access more ***Context Menu*** commands. The ***Reset Curve*** command from this menu will delete all of the intervening nodes and reset the curve to a straight line from the bottom-left (250) to the top-right (0) of the graph.

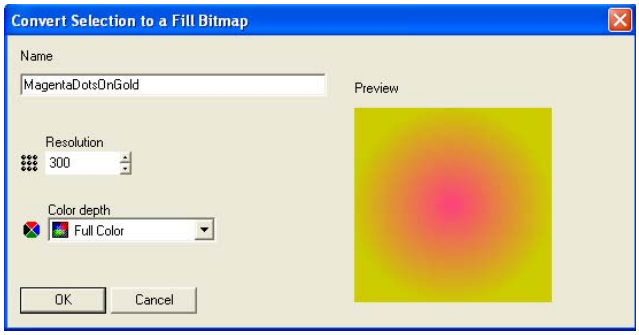


Render Pattern Fill Bitmap

The ***Render Pattern Fill Bitmap*** feature, available in the ***Transform*** *Pull-down Menu*, is used to create a custom pattern Bitmap that will be used with the ***Pattern Fill Tool*** available from the ***Stroke and Fill Tools*** *Flyout*. An example of how to create a Bitmap pattern follows:

Create the Bitmap Pattern

1. Using the ***Rectangle*** tool, create a 2-inch square shape.
2. Apply a ***Radial Gradient Fill*** that is centered in the square
3. Select the square and choose ***Render Pattern Fill Bitmap*** from the ***Transform*** *Pull-down Menu*. The ***Convert Selection to a Fill Bitmap*** dialog will preview the Bitmap that will be created.

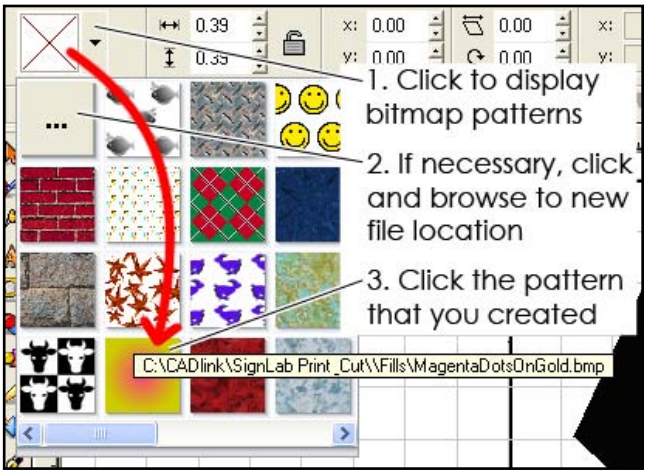


4. Set the ***Color Depth***. For a Bitmap that has "millions of colors," choose the ***Full Color*** option.
5. Set the *Resolution* high enough to maintain acceptable print quality. Simple patterns will not require a resolution higher than approximately 150 DPI; detailed Bitmaps should be set for 200-300 DPI.
6. Type a *Name* that will be used to identify this Bitmap pattern and click on ***OK*** to continue.

The resulting pattern Bitmap will now be saved in the ***Fills*** directory of the FastARTIST installation folder. The pattern Bitmap can be applied using the *Pattern Fill* tool.

Apply the New Pattern Bitmap

1. Create and select a large shape to be tiled with the new pattern Bitmap.
2. From the ***Stroke and Fill Tools*** *Flyout*, select ***Pattern Fill***. The ***Pattern Fill*** controls will appear in the SmartBar.
3. Locate the pattern Bitmap you wish to use.
4. Set the SmartBar controls for the ***Size***, ***Skew*** and ***Rotation*** of the pattern Bitmap.
5. Click on ***Apply*** to produce the finished pattern.


1. Click to display bitmap patterns
2. If necessary, click and browse to new file location
3. Click the pattern that you created
C:\CADlink\SignLab Print _Cut\\Fills\MagentaDotsOnGold.bmp

6. Click on an empty portion of the workspace to finish editing.

Easy Color Adjustments

Within the ***Bitmap*** *Drop-down Menu* are several "*one-click*" tools designed to simplify editing Bitmap images. You may use any option repeatedly on an image to get a stronger effect if you don't achieve the desired results at first.

Clean Up White

The ***Clean Up White*** option will make pixels that are very close to White turn White. Using this tool creates a cascading effect within the colors, turning the lightest pixels White and averaging the color change with surrounding pixels. Each successive mouse click will increase the amount of pure White pixels within the image.

Clean Up Black

This command will make pixels that are very close to **Black** go to **Black**. Using this tool creates a cascading effect within the colors, turning the darkest pixels **Black** and averaging the color change with surrounding pixels. Each successive mouse click will increase the amount of pure **Black** pixels within the image.

Make Lighter

The ***Make Lighter*** option is very similar to a *Brightness* control. Using this feature will lighten the entire image from **Blacks** to Whites.

Make Darker

The ***Make Darker*** feature is just the opposite of *Make Lighter*. Using this option will darken the image across the entire tonal spectrum.

Increase Saturation

The ***Increase Saturation*** command will increase the intensity of the CMYK colors with changing their hue.

Blur Image/ Sharpen Image

These two options are very similar to the *Blur* and *Sharpen* Filters discussed later in this chapter.

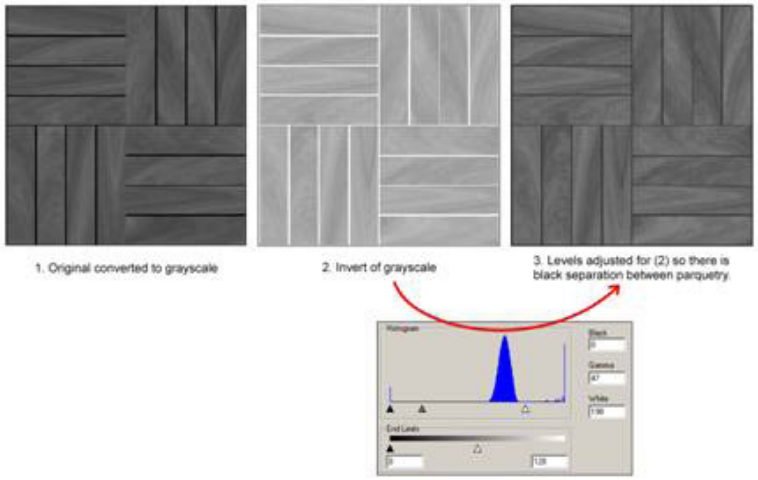
CMYK Color Adjustments

Levels

Levels adjusts the distribution of color intensities throughout the Bitmap, either to correct a scanned image, or to create an artistic effect. Increasing the **Black** level will equate the darkest portions to **Black**. Decreasing the White level will equate the lightest portions to White. Increasing or decreasing the *Gamma* will modify the overall intensity of the Bitmap. ***End Limits*** are used to adjust the and values, which is an effective means of removing absolute White or **Black** from the image.

NOTE: A histogram is a chart consisting of horizontal or vertical bars, the widths or heights of which represent the values of certain data (in this case, the data represents pixel brightness across the Bitmap).

Example of Using Levels:
After a grayscale image has been inverted, the separations between the parquetry in (2) are White. Using the Levels feature, the White point is lowered to equate all the separations to White. The White End Limit is then reduced to remove the separations. Finally the Gamma is reduced to create a Bitmap that is as dark as in the original grayscale (3).


1. Original converted to grayscale
2. Invert of grayscale
3. Levels adjusted for (2) so there is black separation between parquetry

Contrast/Brightness

The ***Contrast*** setting is used to modify the perceived difference between the light and dark areas of the Bitmap.

The ***Brightness*** setting is used to modify the overall intensity of the Bitmap.

Hue/Saturation

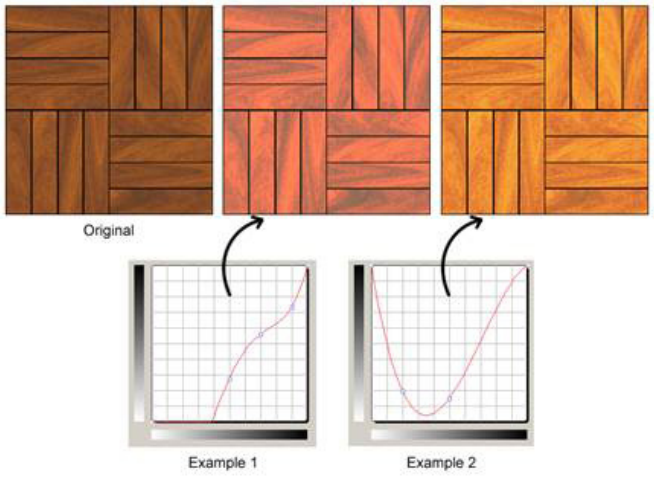
Hue/Saturation adjusts the *Hue*, *Saturation* and *Lightness* values of the Bitmap.

Hue is the visual perception of a specific color, such as red, yellow, violet or orange-brown. The ***Hue*** setting is arranged like a color wheel (ROYGBIV), where adjusting this setting will rotate the Bitmap colors through the color wheel.

Saturation is the colorfulness of an area in consideration of its brightness level. For example, as a color falls under increasing levels of shadow, the color appears darker, even though its saturation remains constant.

Lightness is the appearance of a color in terms of how White or **Black** it appears.

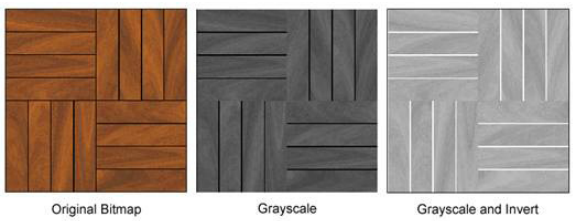
Curves



The ***Curves*** menu adjusts the tonal range (*Shadows*, *Midtones* and *Highlights*) of the Bitmap. The horizontal scale of the graph represents the range of intensity values (shadows progressing to light or vice-versa) and the vertical axis represents the current intensity values. The initial diagonal line represents the original distribution of intensities across the Bitmap tonal range.

The ***Toggle Gradient Mode*** button is used to alternate how the intensity values are displayed. The graph can either display shadows to highlights, with values increasing from 0 to 255, or display highlights to shadows, with values increasing from 0% to 100%. To set specific intensity values, either click within the graph or enter the value using the edit fields. A maximum of thirteen intensity values can be set.

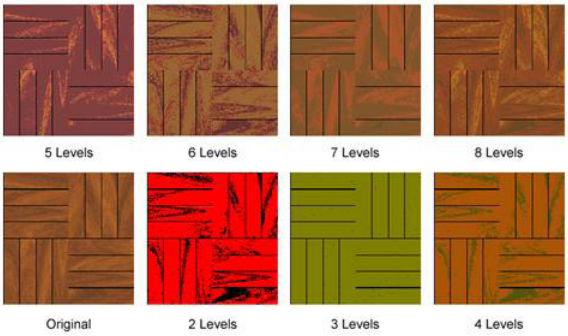
Invert



This selection inverts the colors in the Bitmap, producing an effect similar to photographic negative. This feature can also be used to invert the color of a grayscale image, making the **Black**, White and the White, **Black**.

Posterize

Posterize limits the number of color levels per plane (red, green and blue). For example, two levels mean two of Red, two of Green and two of Blue. The valid range for the number of levels is from 2 to 64.

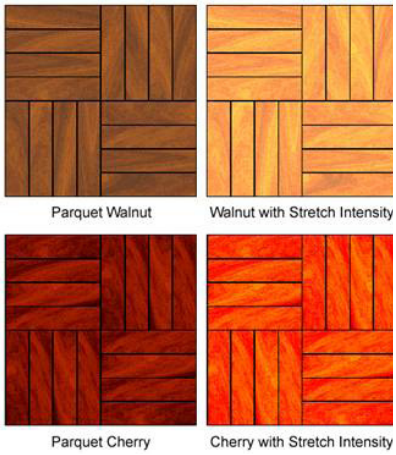


Histo Contrast

Histo Contrast increases or decreases the contrast of the Bitmap image, using a histogram to determine the median brightness. Once the median brightness has been determined, pixel values above the median are brightened, and pixel values below the median are darkened.

Stretch Intensity

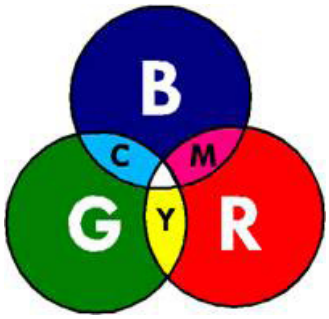
Stretch Intensity increases the color contrast in the Bitmap without changing the number of discrete intensity values (ordinary contrast adjustments can lose high- and low-end values).



Histo Equalize

Histo Equalize linearizes the number of pixels in the Bitmap, based on the specified color space (RGB, Grayscale etc.). This can be used to bring out detail in dark areas of an image.

Balance Colors



Balance Colors redistributes the *RGB values* of individual Bitmap pixels. For each pixel, its **Red**, **Green** and **Blue** components are isolated, and the color sliders are then used to increase or decrease the percentage *RGB* values within each pixel. In this manner, a color cast can be removed from the Bitmap or a color tinge can be created for an artistic effect.

Setting all color sliders to 100% will result in a Bitmap that is entirely White. Setting all color sliders to 0% will produce a **Black** Bitmap.

Swap Colors

Swap Colors swaps the color channels of the original Bitmap. This feature is useful for obtaining artistic effects that would otherwise be difficult to achieve using the other Color Adjustment tools.

Image Filters

Unsharp Mask

The ***Unsharp Mask*** feature is actually considered to be a sharpening function because it increases the contrast between light and dark areas of the Bitmap. Wherever there is a transition between light and dark, the light area is made lighter and the dark area is made darker, making the transition more distinct.

A blurred copy of the Bitmap is created, where the amount of blurring depends upon the ***Radius*** setting. The blurred copy is then subtracted from the original and the resulting difference Bitmap is referred to as the "mask."

Pixel-by-pixel, where the difference exceeds the ***Threshold*** setting, the difference is multiplied by the *Amount* and then added to the original Bitmap. Where the difference does not exceed the ***Threshold*** setting, the original pixel value remains unchanged.

Average Filter

This filter changes the color of each Bitmap pixel to the average color of surrounding pixels. This results in a blur effect.

Gaussian Blur

Gaussian Blur will smooth or blurs pixels with respect to their surrounding pixels. The ***Radius*** determines the surrounding area that is considered when blurring a pixel.

Motion Blur

Motion Blur creates the illusion of movement within the image. The size of the blur is modified through the ***Blur Effect*** setting.

Angle indicates the rotation of the blur, where a positive Angle indicates a *clockwise* blur, and a negative *Angle* indicates a *counter-clockwise* blur.
If the ***Unidirectional*** option is checked, then the blur effect will extend only in the direction specified by *Angle*. If the *Unidirectional* option is unchecked, then the blur effect extends in both directions.

Median Filter

This filter changes the color of each Bitmap pixel to the average color of surrounding pixels. The ***Median Filter*** is similar to the ***Average Filter***, except that ***Median Filter*** is primarily used for noise reduction, rather than a blur effect.

Add Noise

Add Noise adds random pixels to the Bitmap. Adding noise can be an effective means of making an image appear older or dirtier, especially where the purpose is to distract the eye from imperfections in the original image.

Despeckle

This removes speckles from a Bitmap, such as those present in scanned images.

Stylize / Artistic Filters

The following ***Stylize/Artistic*** *Filters* are available under the ***Image*** *Pull-down Menu*.

- **Emboss**
  Emboss applies an emboss effect to the Bitmap, letting you specify the depth and direction of the effect. The Depth indicates the apparent depth of the emboss effect.

- **Solarize**
  Solarize creates an effect that mimics the accidental exposure of photographic film to light. This is done by inverting all color intensities that exceed the Threshold value.

- **Oilify**
  Oilify creates an oil-painting effect. For each pixel, the Amount indicates the number of surrounding pixels that are considered when creating the effect. Increasing the Amount will result in less detail in the resulting image.

- **Mosaic**
  Mosaic creates a mosaic effect by dividing the Bitmap into tiles of the specified size, and then averaging the pixel colors within each tile. This feature is common in censoring items or areas.

- **Spatial Filter**
  The *Spatial Filters* are an assortment of mathematical effects that can be applied to enhance the Bitmap appearance. The usage of these filters may require a bit of trial-and-error to achieve the desired result.

  The assorted categories are:

Emboss	Gradient
Laplacian	Sobel
Prewitt	Shift and Difference
Line segment	

- **Halftone**
  Halftone converts a Bitmap into a grayscale halftone Bitmap. The *Angle* setting is used to rotate the pattern.

The available halftone patterns are:

Circular: Apply a circular halftone pattern

Elliptical: Apply an ellipse halftone pattern

Linear: Apply a linear halftone pattern

Print: Apply a halftone pattern for printing

Random: Apply a random halftone pattern

Rectangular: Apply a rectangular halftone pattern

View: Apply a halftone pattern for monitor display

- **Intensity Detect**
  Pixel intensities within the Bitmap range from 0 to 255 for each color plane (red, green and blue). The ***Intensity Detect*** filter compares each pixel's intensity with the *Low* and *High* values and sets the pixel's intensity as follows:

Pixel Intensity	Result
Between Low and High	Increase intensity to 255
Less than Low	Clear intensity to zero
Above High Setting	Clear intensity to zero

Remove Red Eye

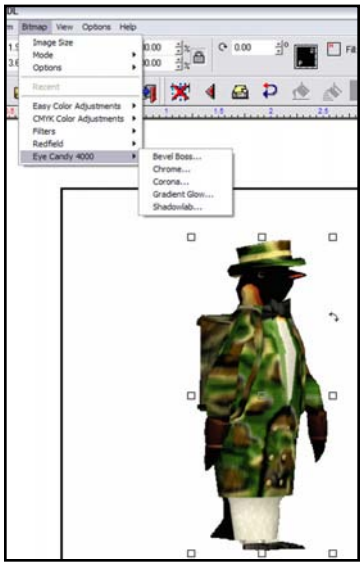
The ***Remove Red Eye*** feature is available under *Bitmap* > *Filters*. This filter removes red eyes that may result from flash photography. For each pixel, only the red color component is evaluated. This feature has no effect on grayscale images, since there is no "red eye" effect in a grayscale image. If desired, a new color can be substituted that is closer to the original eye color.

Red Component of Pixel	Result
Greater than Threshold	Pixels are replaced (Lightness value is applied)
Less than Threshold	No change

The ***FastScan*** tool should be used to select a small region around the eye. Otherwise, all pixels within the Bitmap will be affected.

Lightness is a Percentage value that indicates whether the pixels that are replaced are lightened or darkened. If this value is greater than 100, the replaced pixels will be lightened. If this value is less than 100, the replaced pixels will be darkened. This function preserves the lightness of the original pixels and substitutes the red color with the new color.

FastARTIST Plug-ins



Plug-ins are software modules used to create special effects for existing Bitmaps or to create Bitmaps from line art. Plug-in modules may be purchased through Adobe or other third-party developers. To use a plug-in, select a Bitmap and then choose the given plug-in from the ***Bitmap*** *Pull-down Menu*. Depending on the type of plug-in, a dialog may open allowing plug-in parameters to be edited.

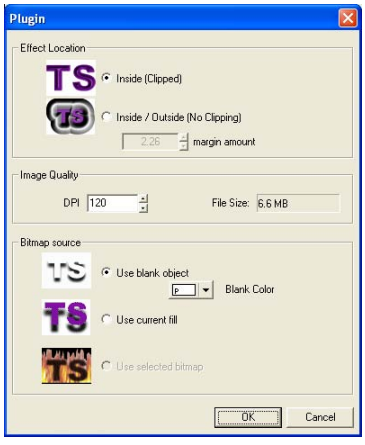
FastARTIST includes five plug-ins from the *Alien Skin Eye Candy 4000* CD. The available plug-ins are: ***Bevel Boss, Chrome, Corona, Gradient Glow*** and ***Shadowlab***. Version 2.0 includes ***Fluid Mask*** for masking out backgrounds and ***Super Size Image***, used to upsize low-resolution images. Refer to ***Chapter 11 - New Features of Version 2.0***. Also, for information on the included Photoshop Plug-ins, refer to ***Chapter 12 - Photoshop Plug-ins and Tools***.

Some plug-ins require that a foreground and background color be set. ***Bitmap > Options > Set Foreground Color*** or ***Set Background Color*** can be used to do this.

IMPORTANT POINT

*For instructions on using specific plug-ins, please refer to the documentation that was provided with the plug-in installation package. A plug-in file is recognized by its *.8bf file extension.* For information on the latest Plug-ins, refer to ***Chapter 11 - New Features of Version 2.0*** as well as ***Chapter 12 - Photoshop Plug-ins and Tools***.

Plug-in Dialog



When a plug-in is applied to line art or line art that has been placed over a Bitmap, the Plug-in dialog will open. For most plug-ins, the effect can be clipped by the line art contour to produce a good effect. However, some plug-ins will create an effect that extends past the line art contour.

Effect Location

Plug-ins effects can create a Bitmap from line art shapes. For the Bitmap that is produced by the plug-in effect, the ***Effect Location*** can be used to automatically apply your original line art as a *Clipping Path* on the Bitmap. The benefits of using a *Clipping Path* are:

1. The "empty" portions of the plug-in Bitmap are usually set to a White color, which are undesirable when arranging the Bitmap with surrounding Objects. Clipping to the original line art will hide the empty portions of the Bitmap.

2. The Bitmap that is produced by the plug-in will often have a jagged edge, which will look poor when scaled up to a large poster size. Clipping will "trim" the jagged edge, such that scaling is acceptable.

NOTE: It is a good idea to scale your original line art to the desired size before applying the plug-in effect. Line art shapes will scale without diminishing their details..

3. The ***Inside*** (Clipped) option will automatically clip the plug-in Bitmap to your original line art shape. Use this option to hide empty potions of the Bitmap, and to trim jagged edges that plug-ins can sometimes produce.

4. The ***Inside/Outside*** (No Clipping) option will not apply a clipping path. This option should be used when the plug-in effect extends beyond the bounds of the original line art shape, such as the *Corona* or *Gradient Glow* plug-ins.

5. ***Margin Amount*** specifies the amount of empty margin around a resulting plug-in Bitmap.

Image Quality

Image Quality determines the resolution (DPI) of the Bitmap produced by the plug-in. The result will vary according to the size and complexity of the original artwork. Keep in mind, a high quality image will require a large file size.

Bitmap Source

Most plug-ins allow for an effect to be applied to more than one Object, with the Objects being either line art or images. In a case where there is more than one original Object, it won't be clear to FastARTIST which should be the "source" for use by the plug-in. To solve this problem, the following options are used to specify how these Objects will be used by the plug-in effect.

- If the ***Use blank Object*** option is selected, then only the contour of the line art shape will be used. The plug-in effect will be applied as if the line art had a White fill color.

- If the ***Use current fill*** option is selected, then both the contour and fill pattern of the line art will be used. This option is typically used when a fancy pattern or gradient fill has been applied to the line art.

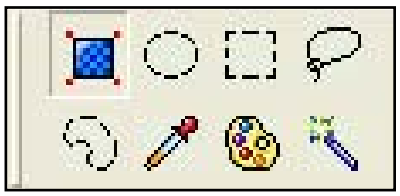
- The ***Use selected Bitmap*** option should be used where line art has been arranged over an image. The plug-in will be applied to the line art and the original image will be modified by the plug-in effect.

In the example below, both the text and image were selected before applying a Gradient Glow effect. The effect was created for the line art (text) with the Use selected Bitmap option, so the original Bitmap was modified to include the effect.

Applying Plug-ins to Sections of a Bitmap

In some cases, a plug-in may require that only part of the Bitmap be selected. If a selection has not been made, then a warning dialog will indicate that a selection is needed.

To select part of a Bitmap, *double-click* the Bitmap to activate FastScan *Mode*. At the far-left of the SmartBar will be tools for selecting portions of the Bitmap.



For example, if a Bitmap containing several leaves is being edited and you wish to apply an effect to only one of the leaves, the *Draw Lasso* tool would be useful.

Select the Draw Lasso tool and sketch a selection area around a leaf as shown.

From the ***Bitmap*** *Pull-down Menu*, choose your desired plug-in.

The plug-in dialog will open, allowing parameters to be edited. Once the parameters have been set, the effect will be applied to the selected portion of the Bitmap. In this case, the plug-in created a motion blur effect.

Applying Plug-ins to Text

Here are two examples of how a plug-in may be applied to text:

Bevel Boss

1. Create a text shape and scale it to the desired print size.
2. Go to ***Bitmap > Eye Candy 4000 > Bevel Boss***.
3. Choose the ***Inside (clipped)*** option from the plug-in dialogue.
4. Click on the Use ***current fill*** option.
5. Click on ***OK*** to continue and the ***Bevel Boss*** dialog will open, which will be used to preview and adjust the bevel appearance.
6. Click on ***OK*** to close the ***Bevel Boss*** dialog, and the bevel effect will be applied.

Bevel Boss

Shadowlab

1. Create a text shape and scale it to the desired print size.

2. Go to ***Bitmap > Eye Candy 4000 > Shadowlab***. Click on the ***Inside/Outside (no clipping)*** option and ***Margin Amount*** will become active.

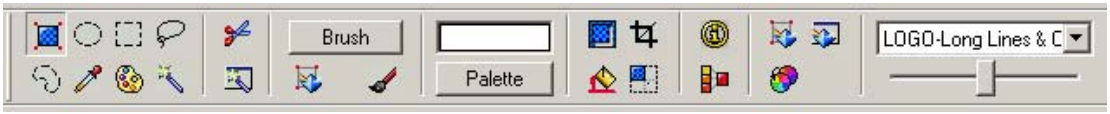
3. Set the ***Margin Amount*** to indicate how far the effect should extend from the text.

4. Click on ***OK*** to continue and the ***Shadowlab*** dialog will open, which will be used to preview and adjust the shadow appearance.

5. Click on *OK* to close the ***Shadowlab*** dialog and the shadow effect will be applied.

FastScan

The ***FastScan*** toolbar contains helpful utilities and menus for manipulating Bitmaps and combining them with other Objects.



To use ***FastScan***, select an imported Bitmap and click on the ***FastScan Tool*** or *double-click* on the Bitmap.

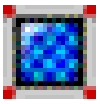
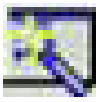
NOTE: Even you have several Objects of the same type on your Workspace, it is important to remember only one Bitmap at a time may be edited.

Applying Image Filters to Portions of a Bitmap

You may also use the FastScan tool to select a section of a Bitmap an apply any filters or plug-ins to just that portion of the image.

Selection Tools

The following selection tools are available for use with Bitmap images and can be activated by clicking the icon in the toolbar.

	Whole Bitmap:	selects the entire Bitmap
	Ellipse Select:	selects an oval area by clicking and dragging
	Rectangle Select:	selects a rectangular area by clicking and dragging
	Draw Lasso:	selects a freehand area by clicking and dragging. NOTE: your selection must be a "closed off" selection.
	Draw Select	Define an area that has an irregular shape.
	Eyedropper	Pinpoint a color in the Bitmap/
	Palette	Select regions based on specific colors. Colors may be either added or subtracted from the current selection.
	Magic Wand	Select region based on similar colors. The Magic Wand setup may be used to customize what is considered to be "similar."
	Magic Wand Setup	Adjust the range of color intensities that the magic wand uses when determining a region. The Fill Holes option will include any gaps as part of the overall selection.
	Clip Region	Create a clipping shape from the current selection. The Clipping Clear command can be used to remove this clipping.
	Invert Selection	Invert the current selection area

Modifier Keys

When creating a selection to modify, holding down the *[Shift]* key while clicking with the left mouse button will add additional items, groups or areas to the selection. Holding down *[Ctrl]* and a mouse button click subtracts from the previous selection.

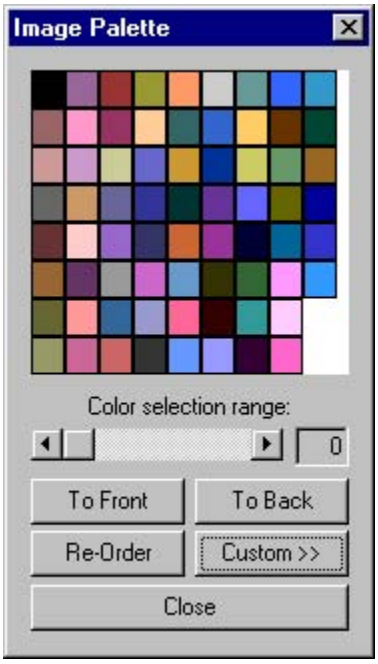
Adjusting the Size

At the far right of the FastScan toolbar is the *Region Selection* field. Use these data fields to adjust the size of the current selection.

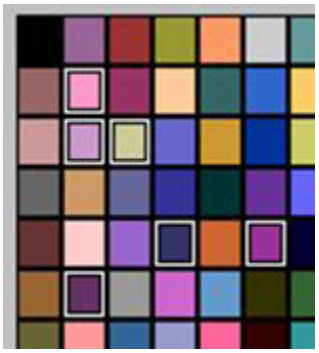
Bitmap Palette

The *Target palette* color is displayed above the *Palette* button. *Double-click* on the *Target* color to add colors to the palette. The new color will not be added until used with either the *Brush* or *Fill* tools. New colors will be automatically appended to the end of the palette. clicking on the *Palette* button will display the current colors in the *Bitmap palette*.

The *Image palette* dialog may be used to select existing palette colors. Several of the colors may be selected, which will cause them to be highlighted.



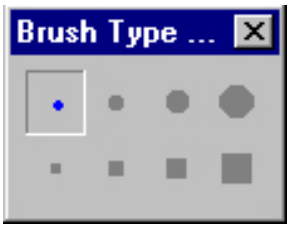
Clicking on the *To Front* button will shift these colors to the start of the palette. Clicking on the *To Back* button will shift these colors to the end of the palette.



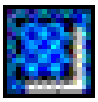
In addition, the *Re-Order* button will sort the palette from most- to least-prevalent colors in the Bitmap. All palette colors will be sorted, and no selection is required. The *Custom* button may be used to add colors to the palette, though as mentioned previously, new colors will not be added until either the *Brush* or *Fill* tools are used with that color.

Brush Tool

The *Brush* tool uses the *Target* color to touch up the Bitmap. There are several brush shapes available by clicking on the *Brush Selection* button.



Move Region



The ***Copy tool*** may be used to move a selected area to another position within the Bitmap or used to copy a selected area to another position.

- **Copy a Selection**
  To copy a selected area, click on the ***Move Region*** *button*. The mouse cursor may then be used to drag the selection.

- **Move A Selection**
  To move a selected area, click on the ***Move Region*** *button* and then hold the *[Ctrl]* key when dragging the selection. The area vacated by the selection will be filled with the *Target* color.

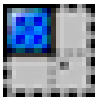
Crop Tool

The *Crop* tool removes all of the Bitmap except for selected areas.

Fill Region

The *Fill Region* tool will fill a selected area with the *Target* color. Select a *Target* color by *double-clicking* on one of the palette colors in the *Image palette* dialog. Select the area to be flooded using the selection tools and click on the *Fill Region* button.

Quarter Bitmap



The *Quarter Bitmap* button will reduce the resolution of the Bitmap by 50% in terms of its width and height. The storage requirements for the Bitmap will be reduced, however the visual quality of the image may suffer.

Extended Information

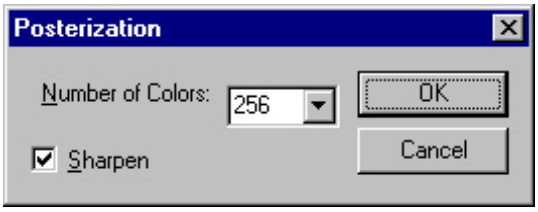
This tool will display information concerning the dimensions and resolution of the Bitmap. Clicking on the *Resample* button will perform the same function as the *Quarter Bitmap* command.

Merge Colors

The ***Merge Colors*** button removes all unused colors from the *Bitmap palette*. It also merges colors that are selected in the *Image* palette dialog (opened by clicking on the *Palette* button) and replaces these colors with the current *Target color*.

Posterize Region

Posterization is the process of generating a color palette for a Bitmap where none exists. It will also expand or reduce the size of the palette attached to a Bitmap. Click on the ***Posterize Region*** *button* to open the dialog and choose the number of colors that will compose the resulting Bitmap.



The ***Sharpen*** option affects the color boundary between Objects in the Bitmap, narrowing it to create the impression of sharp edges.

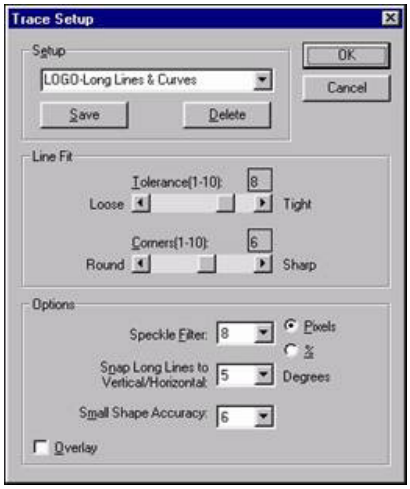
Bitmap Vectorization

Bitmap Vectorization tools are used to trace components of a Bitmap and generate a corresponding sequence of vectors. These vectors may be then be edited and cut like regular workspace Objects. Refer to ***Chapter 11 - What's New With Version 2.0*** to learn about the new Vectorization Wizard added to FastARTIST 2.0.

IMPORTANT POINT

The Vectorization *feature may only be applied to Bitmaps of 8 bits or less (256 colors). However, FastScan filters (discussed later) will produce 24-bit Bitmaps. Therefore, if a filter has been applied to a Bitmap, then the Mode of the Bitmap must be reduced (Bitmap menu) before tracing may occur.*

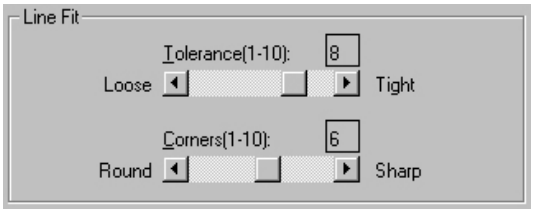
The level of *Vectorization* detail is determined by the ***Trace Setup*** controls, which are located at the far-right of the ***FastScan*** controls.



The ***Vectorization*** button will begin the process of generating the vectors, and the drop-list is available for selecting previous saved settings. Click on the *Trace Setup* button to edit these settings in the *Trace Setup* dialog.

Line Fit

The ***Line Fit*** controls will determine how close the tracing will occur along the edges of scanned artwork. In this way it is sometimes possible to produce a high-quality trace from poor quality Bitmaps.



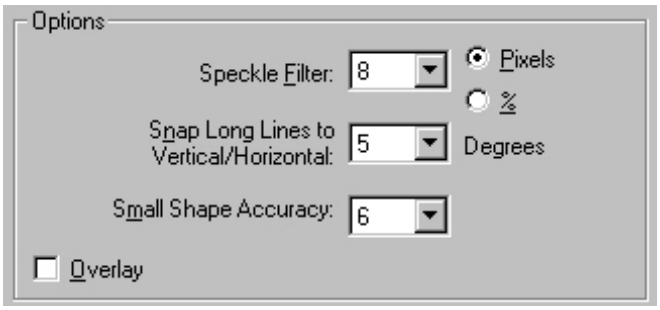
- **Tolerance**
  Tolerance determines the precision with which edges are traced. A tight *Tolerance* (7 or greater) will indicate that a high precision must be used. This is the recommended choice for for a detailed Bitmaps. If the Bitmap is of poor quality or has long, smooth edges, then a loose *Tolerance* should be used (3 or less). A loose *Tolerance* will minimize imperfections in a Bitmap, although fine details may be lost.

- **Corners**
  The *Corners* slider modifies corner recognition. This setting used to help distinguish parts of the Bitmap that represent a corner, versus parts that represent a tight curve. For angular Bitmaps that are composed mostly of sharp corners, use a *Corners* setting of 7 or greater. For Bitmaps that are composed mostly of curves, then use a round *Corners* setting of 3 or less.

Tracing Options

Tracing Options define the general rules to be applied to the trace.

- Speckle Filter
  Bitmaps that are generated using a scanner can often contain undesirable speckles, which are typically caused by a scratched or dirty scanner bed. To ignore these imperfections, the ***Speckle Filter*** may be applied as part of the trace. However, be cautious of using a high setting, since small details may be potentially mistaken for speckles.



Set the ***Speckle Filter*** to the number of pixels that will be recognized as being a speckle. During the trace, only Objects that are larger than the set value will be considered. Speckles may also be recognized in terms of a percentage of the overall Bitmap size. Setting the ***Speckle Filter*** to a percentage is useful when the Bitmap is particularly dirty.

IMPORTANT POINT

While higher Speckle *filter settings result in fewer extraneous Objects being traced, it may also result in the loss of smaller Objects. Exercise caution when choosing an appropriate filter setting.*

- **Snap Long Lines to Vertical/Horizontal**
  When using a scanner to create a Bitmap, the original document may not be perfectly aligned on the scanner bed. As a result, lines that were intended to be precisely horizontal or vertical will be slightly incorrect. The ***Snap long lines to vertical/horizontal*** setting can compensate for misalignment of the original document.

  For example, a setting of 5 degrees will correct lines that are "off" by that amount. If the *Degrees* can not be set high enough, then the document should be scanned again or the Bitmap can be rotated on the workspace.

- **Small Shape Accuracy**
  The effectiveness of *the* ***Line Fit*** settings may depend upon the relative size of the Bitmap versus the component Objects that make up the Bitmap. For example, a small Object may be considered as dirt when the Bitmap is small. However, the same Object will be more significant when the Bitmap is large.

  To determine *Small Shape Accuracy*, assess the size ratio between the largest Bitmaps Objects versus the smallest. When the ratio is large, set the accuracy to high (7-10). Where Objects are similar in size, set the accuracy to low (Off-3).

- **Overlay**
  As part of the tracing, the Bitmap is scanned in order to identify the component Objects of the Bitmap. The *Overlay* option is used to choose the style of scanning that is used.

- **Traditional Scanning Style**
  If the *Overlay* button is disabled, then the *Traditional* scanning style will be used, and each Object will be identified as an independent part of the Bitmap.

- **Overlay Scanning Style**
  Overlay scanning will create a mask for each palette color and each mask will then be evaluated to help identify distinct Objects.

Given this Bitmap... the Traditional style would yield these Objects.

Given this Bitmap... the Overlay style would also yield these Objects.

Since masks are evaluated according to the order of their colors in the Bitmap palette, it is recommended that the ***Re-Order*** button be used *first* (*Image palette* dialog) to signify the importance of more frequently used Bitmap colors.

Overlay tracing would be the preferred choice if you wished for simpler Objects to be produced or for no overlap to occur between Objects.

Centerline Tracing

The *Centerline* feature is available in the FastScan tools. This tool uses the Bitmap qualities to produce a centerline traced drawing that can be cut, routed or engraved by FastARTIST. This feature works best with larger size Objects where v-bits and/or conical bits have an obvious effect. As a result, this feature does not work as well with photographic images.

Applying Centerline Tracing

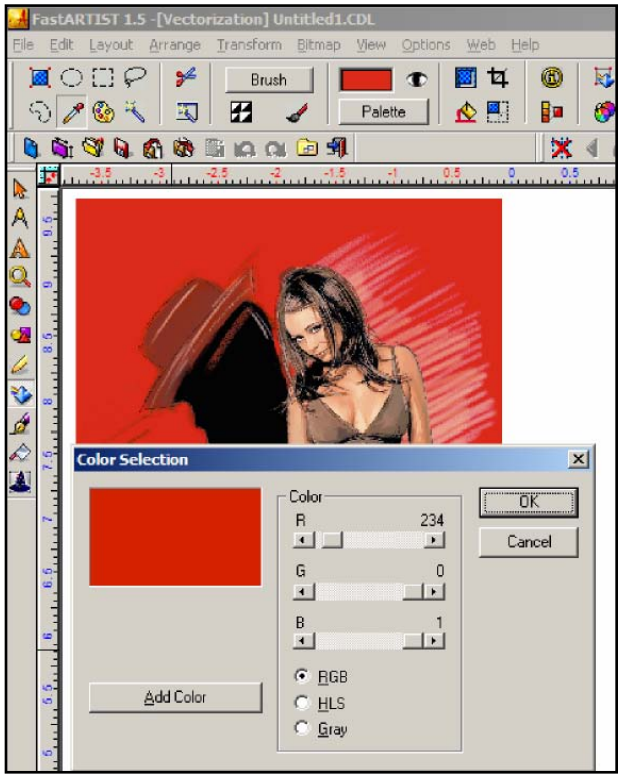
Pressing the *Vectorization* button applies a *Centerline Trace* to the selected Object based on the settings provided.

Creating Transparent Bitmaps in FastARTIST

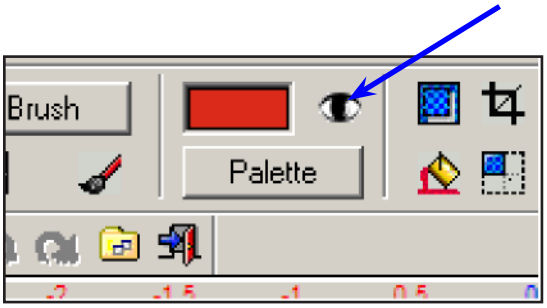
Some images may need to have transparent backgrounds meaning that there is no background color.

NOTE: Refer to ***Chapter 10 - New Features of Version 2.0*** and ***Chapter 11 - Photoshop Plug-ins and Tools*** for for image editing options and tools.

To set transparent backgrounds in FastARTIST, *double-click* on the image to enter *Bitmap Editing Mode*.



Using the *Eyedropper* tool, click on the background color (**Red** in this example) and click on the *Add Color* button in the *Color Selection* dialog box. This will make the selected **Red** the current color.



To finish making **Red** transparent, click on the *Eye* icon next to the selected color. This acts as a toggle switch- selecting it again will deactivate any transparent color.

IMPORTANT POINT

The background color can be any solid color, not just **Red**. *For example it can be* White, **Black**, **Blue** *etc. However, FastARTIST will remove one color only. If your image has a multi-color or gradient background, it may be necessary to use an application like Photoshop to make the image print ready.*

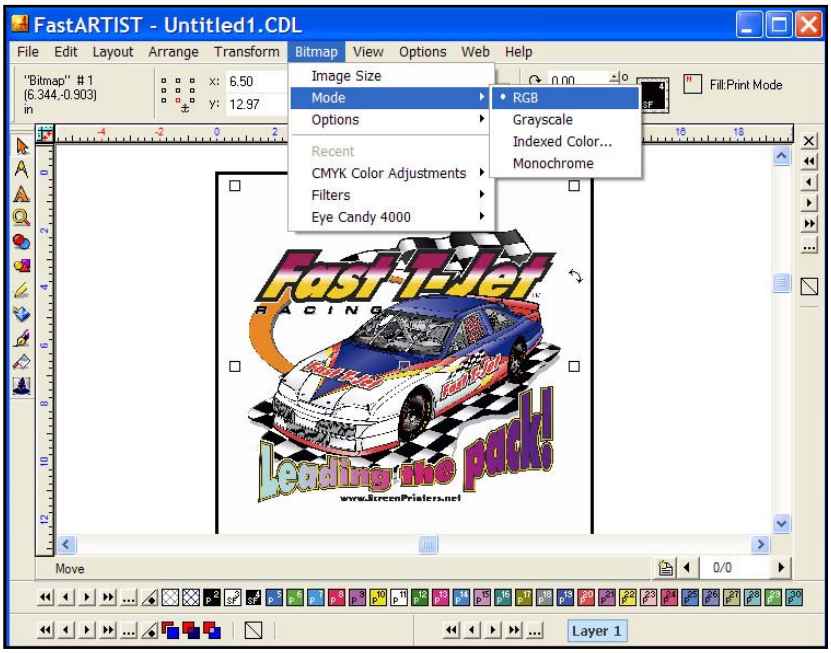
Chapter 8

Basic Printing in FastARTIST

Your T-Jet is designed to produce an image using the four colors of CMYK (**Cyan**, **Magenta**, **Yellow** and **Black**), along with White, if it has been specified as a print color for Highlights or as an Underbase, unless you are using an 8-color system.

To print an image, *Open* or *Import* a file using the *File* menu. If you *Open* or *Import* a bitmap file from Photoshop or another program, ensure the file is in RGB format. The file may open on the page the wrong size if it is in CMYK format.

Because this software is a very powerful tool, you also have the option of creating the entire image in FastARTIST.



Once the image is placed in the Workspace, select *Print to FastRIP* from the *File* menu. This command will send the image to your printer through a printer driver called FastRIP. FastRIP is a *Raster Image Processor* that tells the printer how many passes to make, how much ink to lay down, whether to print in unidirectional or bi-directional mode and how to print White ink if applicable.

WARNING

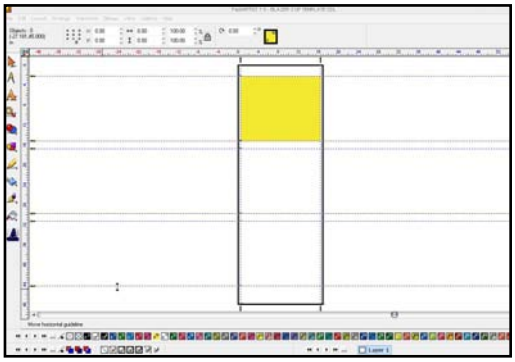
If you have not configured FastRIP, you cannot output an image to the T-Jet Inkjet-to-Garment printer. Before continuing with this Chapter, please ensure you are familiar with all the information contained in Chapter 7, especially* Print Mode *selection.

Using Templates

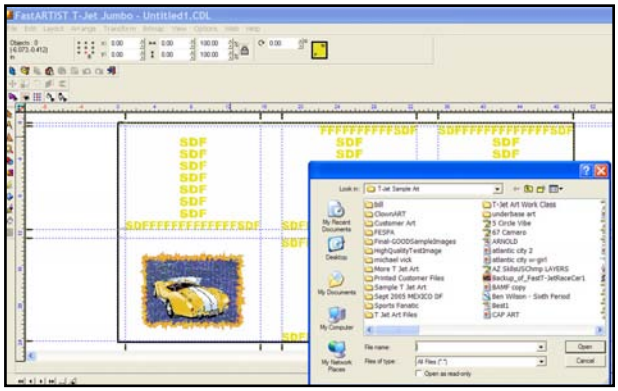
The easiest way to set up a print is by utilizing the preconfigured Templates. These have been precisely laid out to correspond to the Shirt Board size(s) on which you'll be printing.

Go to *File* > *Open* and locate the *Template* folder in the FastARTIST directory. *Double-click* to open this folder and you'll notice files for each Shirt Board size. (Consult your printer's User's Manual for the exact specifications and dimensions of any available Shirt Boards.) Each template may be loaded in either *Portrait* or *Landscape Mode* and there are three template types; Custom Image Placement, Automatic Image Placement – Template and Automatic Image Sizing – Proportional.

- **Custom Image Placement File**
  Custom Image Placement brings up a representation of the full bed with guidelines showing where the individual Shirt Boards are located. You may import or create file(s) that fit within the guidelines and place them on the template. (This file opens with a square in the first location, but you may delete this square.)



- **Template Placement File**
  When a file is opened, you are prompted for a Template and then asked for the image name(s) to be placed within the Template. FastARTIST will automatically place your image(s) on the Template. This template uses text placeholders that are replaced when images are loaded, therefore you may get a "Missing font error" when loading this template if you do not have Arial Black Italic on your computer. You may Ignore any missing font errors.



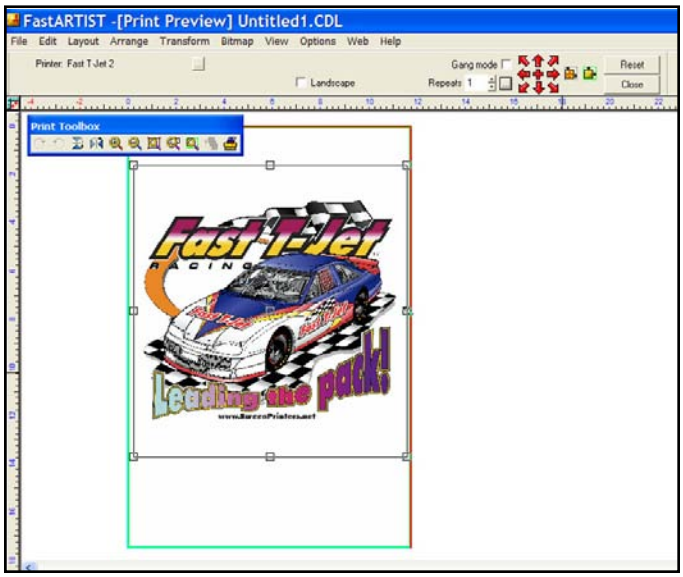
- **Proportional Placement File**
  The Proportional Placement option file is similar to the Template file but it automatically resizes any file to fit proportionally within the guidelines.

Print Preview

To print a job, choose *Print to FastRIP* from the *File* menu. FastARTIST will preview the job as it would appear upon the media.

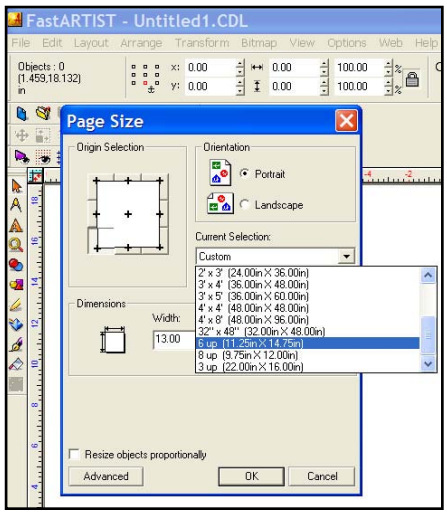
At the top of the Workspace, the current print settings are displayed in the *SmartBar*. In addition, the *Print Toolbox* provides additional commands that may be applied to the job.

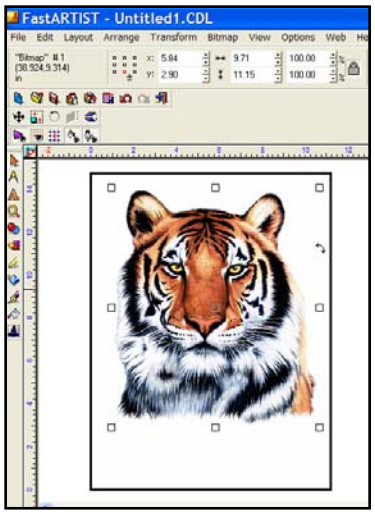
If the image is too large for the preset page size the image will be tiled across multiple pages. Since the T-Jet cannot tile, you must size the image so it falls on one page only. Once you have it sized to fit on a page, the commands for moving it and centering it are available in the *SmartBar*.



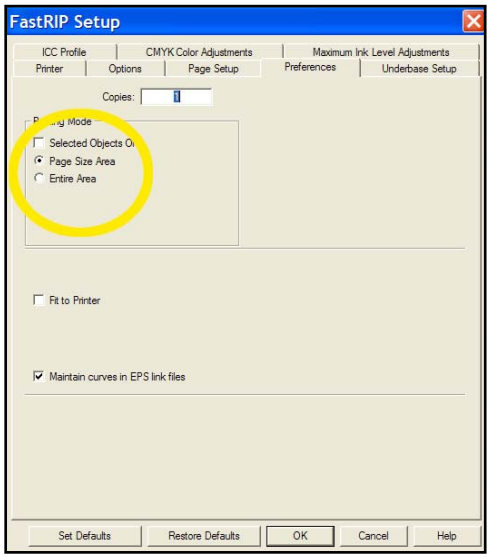
Printing the Same Image Multiple Times with Gang Mode

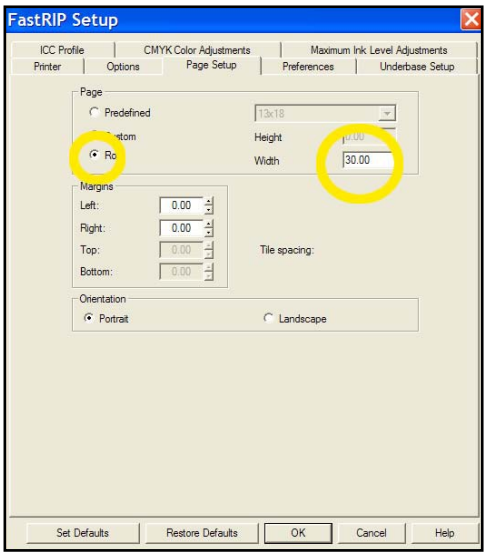
When printing with the standard templates, FastARTIST needs to build a very large file. Imagine how large a file would be if it was 17” x 47” rather than a standard 13” x 18” image? When printing the same image multiple times, you can actually conserve computer memory by using *Gang Mode*. In *Gang Mode*, only one file is loaded and the computer places it in the proper location on a template without duplicating the file multiple times in memory.





1. To use *Gang Mode*, you must place the image to be printed on one of the preset *Page Sizes* that correspond with the Shirt Board(s) you are using (*Layout > Page Size)*. Click on *File > FastRIP Setup* and set the final *Page Size*. Click on the *Page Setup* tab and select *Roll*. When you are finished with these settings, click *Ok*.

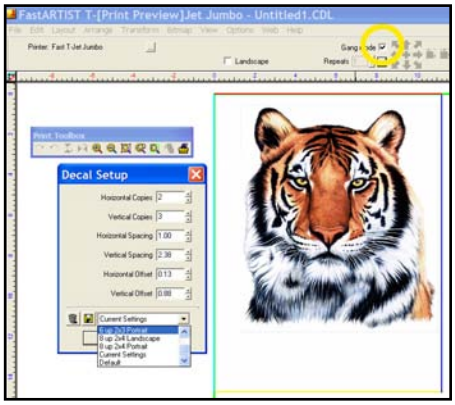




2. Send the file to FastRIP by selecting *File > Print to FastRIP*. Check the small box that says *Gang Mode*. This will bring up the *Decal Setup* screen. Remember, FastARTIST at its core was a sign printing program and this routine was designed to print multiple images that are all the same on a sheet of decals.

3. In the *Decal Setup* window, choose the appropriate Shirt Board configuration from the *dropdown* selection window. Choose the orientation– *Landscape* or *Portrait*.

4. Once you have choosen the orientation, FastARTIST will display the image the way it will look on the Shirt Board. You will be unable to move the images around at this point.



5. Press the *Print* icon in the *Print Toolbox*.

Print Preview Controls

Landscape versus Portrait Orientation

The *Landscape* option is used to toggle the media orientation between portrait and landscape.

IMPORTANT POINT

Toggling the Landscape option will reset any scaling or positioning previously performed.

Tile Overlap (horizontal and vertical) settings are applied with respect to the media that is loaded into the printer, not the orientation of the image upon the media. For example, if the *Landscape* option is toggled, the image will be rotated, however, the *Tile Overlap* settings will not be rotated with the image.

Orientation	***Leading edge of media***
Portrait	Top edge of preview
Landscape	Left edge of preview

Repeats and Gang Mode

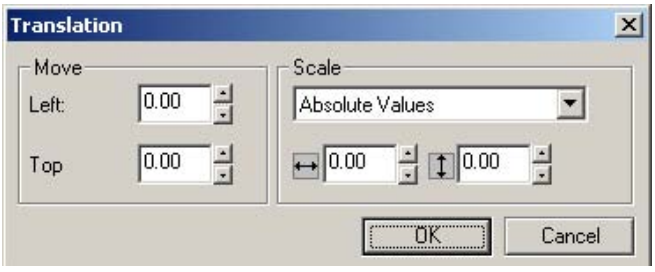
These modes are designed for multiple images on the same page.

Alignment

The *Alignment* buttons are used to adjust the placement of the shapes upon the media. These buttons are only available when the image(s) are smaller in area than the media size.

Size and Move

Clicking the *Size and Move* button will open the *Translation* dialog.



In addition to moving the shapes to a specific location on the media, the shapes may be scaled as follows:

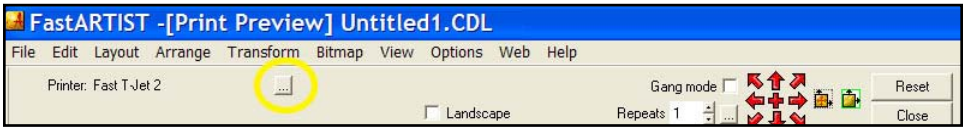
Absolute Values	Set a specific width and height for the shapes. The original proportions of the shapes will not be preserved.
Percentage Values	Scale the shapes by a percentage of their original sizes. The proportions of the shapes will be preserved.
Ratio	As an alternative to expressing a percentage, the shapes may be scaled according to a ratio value of their original sizes. The proportions of the shapes will be preserved.

Fit to Page

At the far-right of the *SmartBar* is the *Fit to Page* button. Clicking this button will maximize the shape(s) upon the media, while preserving their aspect ratios.

Page Size

Page Size indicates the area that is available for printing. This is represented by a green rectangle around the shapes being output.



The dimensions of the green rectangle are determined by in the *Page Setup* tab from the *File* > *FastRIP Setup* menu.

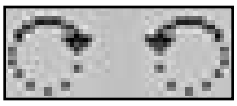
IMPORTANT POINT

FastARTIST refers to its page dimensions in terms of width and "height." For purposes of printing a two-dimensional image on a garment or non-textile item, it is important to be aware of the fact that "height" means the same thing as "length."

Print Toolbox

The Print Toolbox is the floating toolbar that becomes active in the Print Preview mode.

- **Rotation**
  Rotates the shapes by +/- 90 degrees. Perform a rotation to help minimize wasted material.

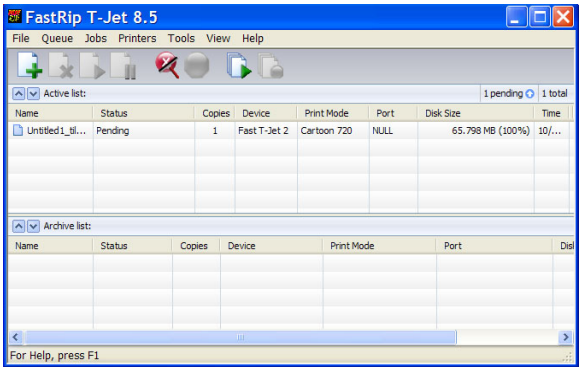


- **Mirror**
  Mirror the shapes either vertically or horizontally. Typically, *Mirror* is used where the media is to be reverse-applied, such as the inside of a window pane.

- **Zoom**
  The *Zoom* tools are used to change the perspective of the shapes being previewed. In addition to these buttons, keyboard shortcuts may be used.

- **Print Button**
  Clicking the *Print* button will send a print job to FastRIP.

The FastRIP Queue will open and the job will start to process.


FastRip T-Jet 8.5
File Queue Jobs Printers Tools View Help
Active list:
1 pending 1 total
Name Status Copies Device Print Mode Port Disk Size Time
Untitled1_til... Pending 1 Fast T-Jet 2 Cartoon 720 NULL 65.798 MB (100%) 10/...
Archive list:
Name Status Copies Device Print Mode Port
For Help, press F1

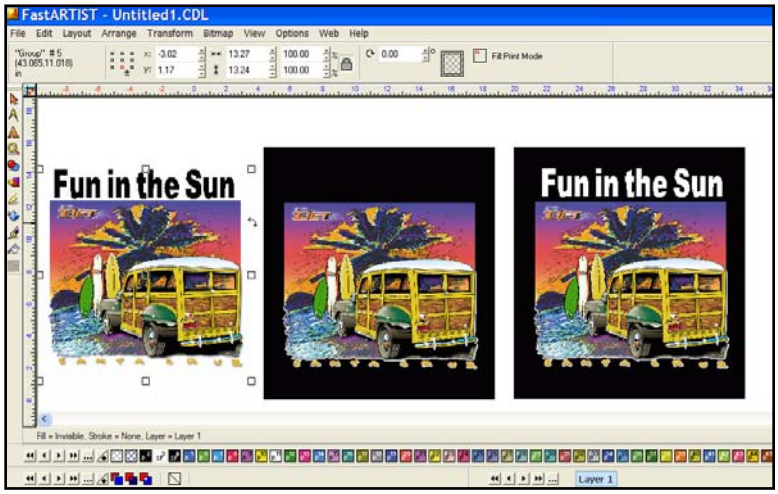
Chapter 9

Advanced Printing (With Version 1.5 and Previous)

Although FastARTIST 2.0 offers several extra tools features and printing methods, some users may decide to stick with the "old" methods of printing with FastARTIST or maybe don't have the necessary time it can take to learn the new methods and tools of version 2.0. This chapter will cover the previous version methods of printing using the Underbase Wizard along with the steps that go along with setting up the art and underbase as well as Highlight white. In any case, we recommend taking a look at the following chapter, Advanced Printing with FastARTIST 2.0, to get the full benefit of this very powerful software.

Introduction

Modern Inkjet printers are designed to print either four color CMYK or some combination of seven or eight colors with the addition **Light Cyan**, **Light Magenta**, **Light Black** and even Light Light Black. In order to print White ink, however, it is necessary to replace the four light colors with White. This allows the White ink to be applied through four sets of nozzles because its pigment on a garment is very weak.



This is why FastRIP and FastARTIST were created. These programs were specifically designed to handle the requirements of printing White ink. When you combine the power of FastRIP to "open the valves" and the unique ability to control White ink output, printing on dark shirts becomes a reality.

So, with all of this great software and hardware, printing White ink should be simple, right? Well, it's not. For example, what happens if customer brings in a piece of artwork with **Black** type and requests some prints on light shirts and some on **Black** shirts? It would be nice, but your software won't automatically "know" that the **Black** type needs to be outlined in White or converted to White type.

This is where the human factor comes into play- you will still have to make some decisions. If you are new to computer graphics and to printing on dark shirts, this can result in a slight learning curve. However, with a little patience and a little practice, you'll soon be printing shirts like a pro.

WARNING

If you have not configured FastRIP, you cannot output an image to your Fast T-Jet Inkjet-to-Garment printer. Before continuing with this Chapter, please ensure you are familiar with all the information contained in Chapter 7, especially* Print Mode *selection.

About Underbase and Highlight White

When printing on light shirt colors, a little white below the colors will help the image stand out. If the image has any white in the actual design, it will help the image look complete. When printing on dark or **Black** shirts, you need more white under an image. In order to help the lightest parts of the design really stand out, you may need an additional white pass called a *Highlight*.

FastARTIST and FastRIP can control all of this. In fact, many images need multiple passes of White to lay down enough ink. For very bright White on a **Black** shirt, it is common practice to do two or three or passes of the base color (*Underbase*), followed by a pass that prints the CMYK colors AND the Highlight White.

Types of Underbase

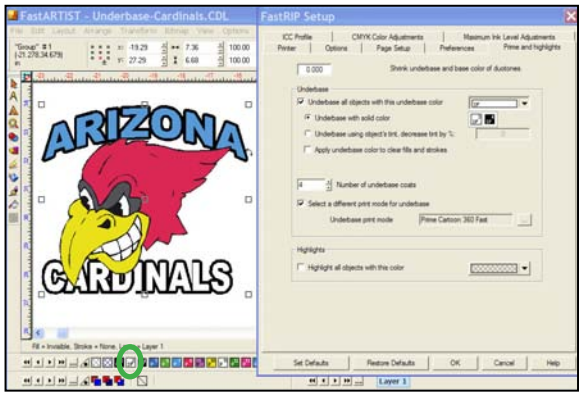
Cartoon prints, with solid *Spot colors*, often require a solid White Underbase. Photographic images, or images with lots of gradations, do not always need a solid *Underbase*. The secret to great looking **Black** garments is to let the shirt be part of the image. A grayscale *Underbase* that only puts White where it is needed will create a soft and professional looking print.

Therefore, you will have to choose the type of Underbase you want to use for a given piece of artwork. Yes, decisions, decisions, decisions! Printing White ink on dark shirts will require a few "sample prints" as you experiment with the proper number of White passes, solid or grayscale Underbases and more.

Underbasing Simple Line Art

Vector based images created in FastARTIST, or images imported from applications such as CorelDRAW or Illustrator, are easy to *Underbase*.

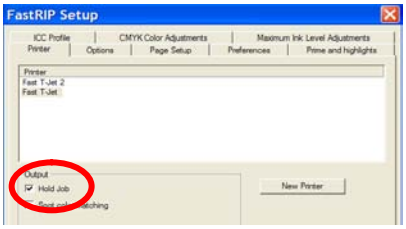
1. If you were to create a solid White Underbase for this image, you would access the *FastRIP Setup* dialogue from the *File* menu.



2. Click on the *Underbase Setup* tab. Check *Underbase all objects with this Underbase color* and choose the *White SF* color swatch from the *dropdown* color field.

3. Check *Underbase with Solid Color* and set the number of passes in the *Number of Underbase Colors* window. Select your *Print Mode* and click on *OK*.

Configuring FastRIP to Hold a Job

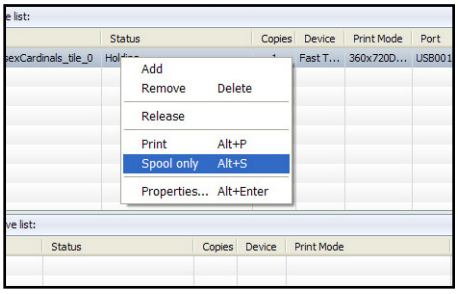


When printing an Underbase, it is often desirable to view the final print image prior to outputting onto a garment. To do this you must tell FastRIP to "HOLD" a print job before it spools it. Check *Hold Job* in the *Printer* tab. This will force FastRIP to let you decide when you want to print.

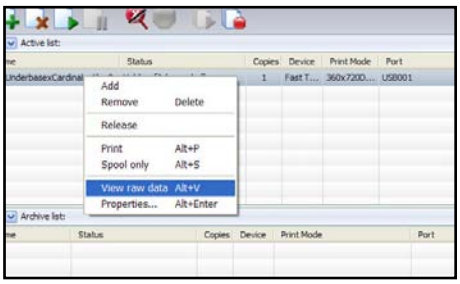
When you are ready to print the job, click on the *Printer Button*. This will start FastRIP.

IMPORTANT POINT

If you have the Print with Preview option enabled you will be taken to that screen. Once you are done analyzing the preview, you would select the printer icon from the Print Toolbox.



FastRIP will open and the job will say *Pending*. *Right click* on the job title and select *Spool Only*.

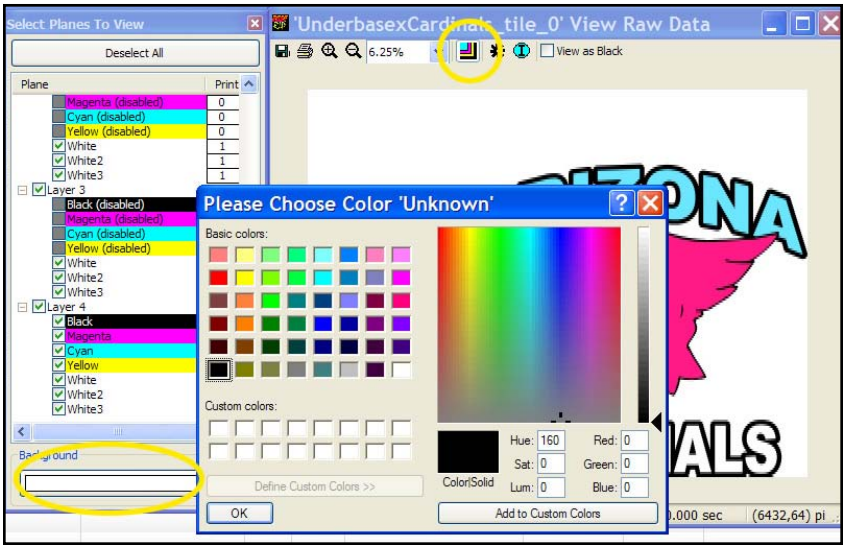


The job will start to process and you will see it *Interpreting*, *Processing*, etc. Eventually it will say *Holding*. *Right click* on the job title again and select *View Raw Data*.

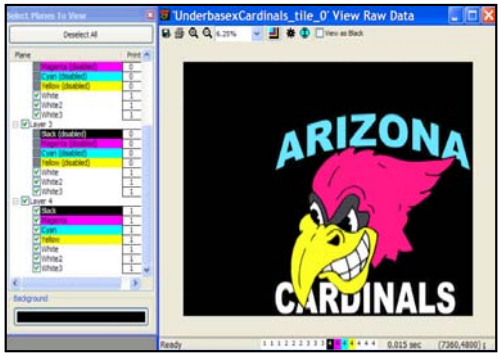
View Raw Data Window

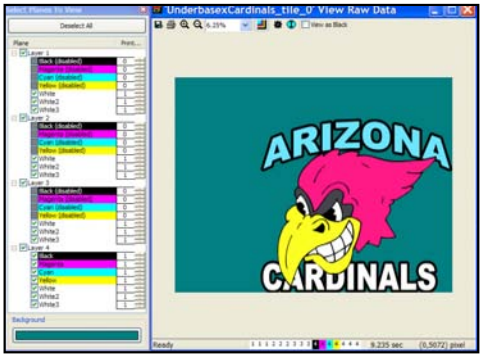
The *View Raw Data* window is VERY informative.

Here you can select to see *All Planes* (all the actual printing functions including each actual pass or Layer) or change the background color to simulate the color of the garment.

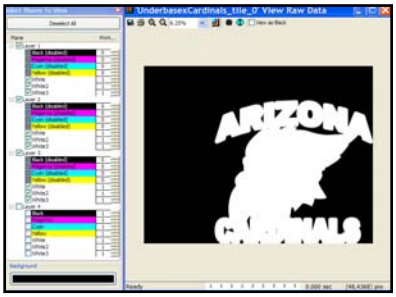


You may also turn off a Layer (uncheck it) to see what it looks like. Layer 1 is the FIRST print pass your T-Jet will make. We indicated in the *FastRIP Setup* window we wanted THREE passes of White, so you will notice that there are three layers that show ONLY White being printed. In this example, Layer 4 shows the CMYK colors being printed. We did NOT tell this image we wanted a highlight White.





You may also choose to view only the Underbase to see how it looks.



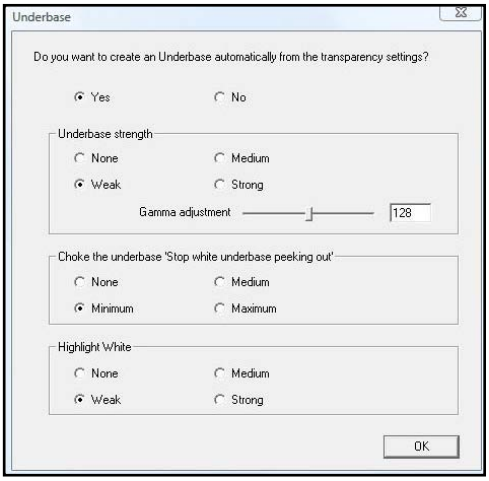
The *View Raw Data* screen can be made larger along with the *Select Planes* window. This routine actually scans the image to be printed and displays it pixel by pixel, if you choose. However, this can be a VERY slow process. It is often easier to just *Zoom* in to view a portion of the image. This is where a fast computer with a lot of RAM really helps!

IMPORTANT POINT

For any part of an image that requires White as a printed color, you MUST fill that section with* Spot *White and not* Process *White.

Underbase Strength

For even more control of your Underbase output, an *Underbase Strength* option containing four Underbase level modifiers and a *Gama Adjustment* control are available. Upon importing a PSD, TIFF, EPS or PNG bitmap file with a transparent background, this window will automatically query whether you wish to apply an Underbase to the image.



Underbase Options

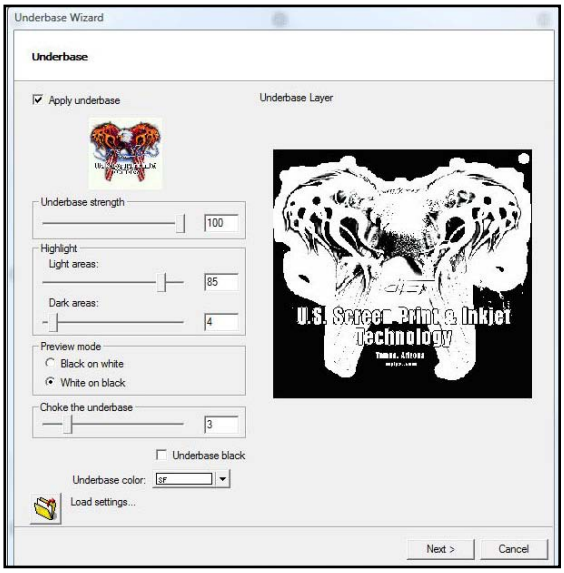
- **None**
- **Weak-** This is identical to the *Normal* setting within the *Underbasing Wizard*. The *Underbase Strength* will be 100% for White Areas, 80% Underbase in Light Areas and 0% in Dark Areas.
- **Medium-** This is identical to the *Heavy* setting within the *Underbasing Wizard*. The *Underbase Strength* will be 100% for White Areas, 80% Underbase in Light Areas and 8% in Dark Areas.
- **Strong-** This new setting adds *Underbase* under **Black** image areas in to the *Medium* setting distribution.

The *Gamma Adjustment* feature will affect the *Midtones* of the Underbase in the event it is too strong or too weak.

Highlight White Options

- **None**
- **Weak-** Regions 100% White 80
- **Medium-** Regions 100% White 90
- **Strong-** Regions 100% White 100

Choking the Underbase



FastRIP allows you to *Choke* the Underbase to prevent "peeking." Peeking occurs when the White *Underbase* appears as a small fringe beyond the borders of an image. This is most likely to occur when different resolutions are used for the *Underbase* and CYMK colors, however peeking can occur even if both print modes are the same DPI. This is because the ink will bleed slightly as it becomes thicker.

The *Choke* feature will reduce the size of the Underbase image to prevent peeking. The amount of *Choke* applied to an image depends on the resolution of the image. The ideal resolution for an image to be choked is 300 DPI. If the image's resolution is less that 300 DPI, the *Choke* feature will result in more pixels being affected.

Choke Settings

- **None**
- **Minimum**- Chokes the *Underbase* approximately 2 pixels on a 300DPI image
- **Medium**- Chokes the *Underbase* approximately 3 pixels on a 300DPI image
- **Maximum**- Chokes the *Underbase* approximately 5 pixels on a 300DPI image

IMPORTANT POINTS

Do not choke back too many pixels on light shirts. If you choke back too many pixels, the edge of your image may shift color because of a lack of *Underbase* under the color pixels. Use the Minimum or Medium settings. If you are printing to dark shirts, you may apply a slightly larger Choke. The edge of your image may shift color, but won't be noticeable on a dark shirt.

Also, it is VERY important to choose a White SF (spot color White) from the color palette. Process White looks White but will NOT print as an Underbase or highlight.

NOTE

If you use the Choke Underbase option, choose the Strong Underbase setting. This will apply Underbase under **Black**. *If you do not, you may have areas in your image where there's a gap between* **Black** *output and White output.*

Printing an Underbase with a Highlight

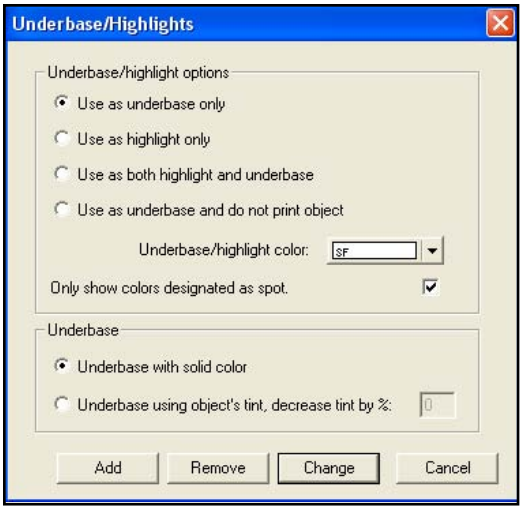
Our "Fighting Cardinal" sample image looks good, but it can look even better with the addition of *Highlights*. The teeth, eyes and the word *Cardinal* would all be brighter if another layer of White is printed at the same time as the colors. This layer is called *Highlight White*.

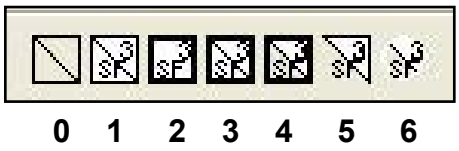
IMPORTANT POINT

Highlights work BEST with vector images, but they can also be applied to Bitmap images. The drawback to using Bitmap images is that FastARTIST views the entire image and does NOT take into account any canvas areas around the image. If the Bitmap has non-printing canvas (White) around the image, this will end up be printing as White.

White Ink Selection

FastARTIST gives you seven pre-configured Underbase settings covering the various combinations of Underbase and Highlights. *Double-clicking* on any of these icons will allow you to see the settings for each.





0– No Underbase or Highlight

1- Underbase Only with a Solid Color

2- Highlight Only

3- Underbase and Highlight with a Solid Color

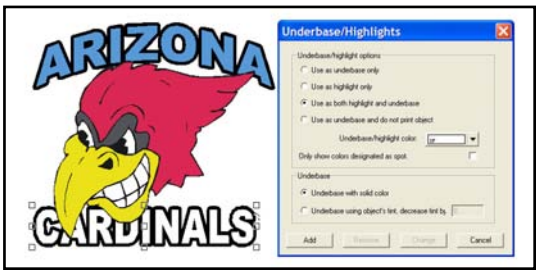
4- Underbase and Highlight with a gradient tint from design

5- Underbase Only with the object's tint

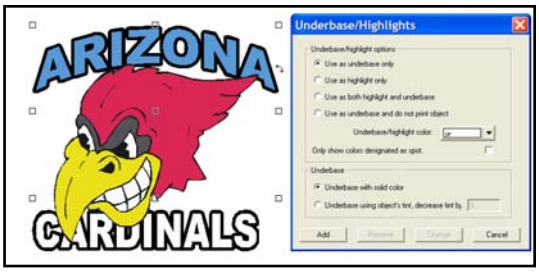
6- Underbase Only and Do NOT print the Object. Use the object's tint. This is good for images that will be printed as Black and White on a Black shirt.

Assingning White to Design

To create a *Highlight* for the White in the word *Cardinals*, ungroup the design (if grouped) and select ONLY the word *Cardinals*. *Double-click* on the *Underbase icon* of choice.



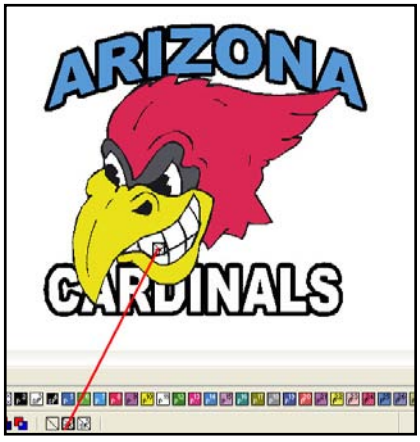
This will open up the *Underbase Highlight Menu*. From here, you can decide what to do with the word *Cardinals*. In this case, we want all of the White in the word to be part of the Underbase and Highlight passes.



After clicking on *Add*, you can now select other parts of the image. If you want a solid Underbase under the entire design, group the image and *double-click* on the appropriate *Underbase icon*. You have now told FastRIP to create a solid *Underbase* for everything you have selected. You may also *drag-and-drop* the *Underbase icon* on a grouped image

Adding Highlights to Other Elements

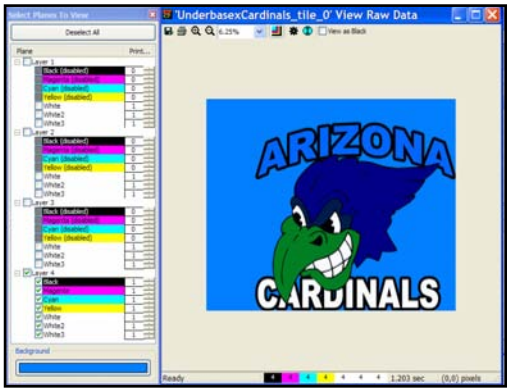
We really should include the teeth and eyes in the *Highlight* layer, too. If you *ungroup* the entire design, you can drag the *Underbase and Highlight* icon onto the White of the eyes and teeth. This will now apply your previously set attributes to these objects as well.



Underbase or Highlight attributes can automatically be applied to a selected object by selecting an object and clicking once on the desired *Underbase icons*. For an object that has a thick stroke, *right-click on* the icon to apply the attribute to the stroke.

Viewing Raw Data of the Highlight

You can see how we have changed the final image by sending the file to FastRIP and choosing *View Raw Data*. You will see that when you view ONLY Layer 4 (Highlight and CMYK) White has been added to boost parts of the design.



Underbasing Full Color Images

If you are working from a Bitmap image (scanned, a photo or a design from Photoshop, for example), you can't select a specific object to *Underbase*. The image is considered one large square graphic to the computer. In most cases you will want a *Grayscale* Underbase (not solid) for an image like this so, it will not be heavy and rubbery on the shirt.

In order to create a "template" for the White ink on a dark shirt, the image must be a negative of the file. When you print a negative of the file with White ink, it becomes a positive. Potentially confusing, yes, but it's the facts of life when making an *Underbase*.

When you convert a full color image to *Grayscale* and make a negative of it, you have a file ready to print with White ink. The image on the left shows what the final file would look like as a negative. The image on the right is the image printed with White ink.

The Underbase Wizard

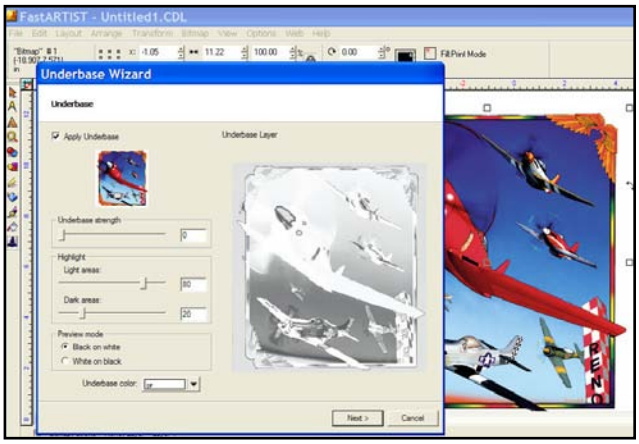
The *Underbase Wizard* was designed specifically to assist with the challenges of Underbasing Bitmap images. You can access it from the left *Toolbar*.

However, it can't perform magic. The easiest artwork to use is art that has a hard edge like the Air Show image. Artwork that is harder to Underbase has soft or vignette edges like the Cowboy image.

NOTE

When opening the Underbase Wizard, you are given the option of Saving/Loading previous Wizard settings in order to recall previous Underbase or Highlight settings. This comes in handy if you are working with similar images or if you need to use the Underbase Wizard for the same image more than once.

Since this is the first time we have are Underbasing an image, we have no configurations to recall, so have to do it manually.



To work with hard edge images that have White in the canvas - like the Air Show, first make sure you know the image resolution. Prior to using the Underbase Wizard, your image must be resampled to the final actual print size at 150 to 300 DPI. A good rule of thumb- the more text the higher a resolution should be used. If it is mainly an illustration (like the Cowboy) then 150 DPI is acceptable.

IMPORTANT POINT

If the image is 72 DPI and a low quality JPG file (for example, from your customer's website), it may be soft and jagged and no amount of upsampling will save the image.

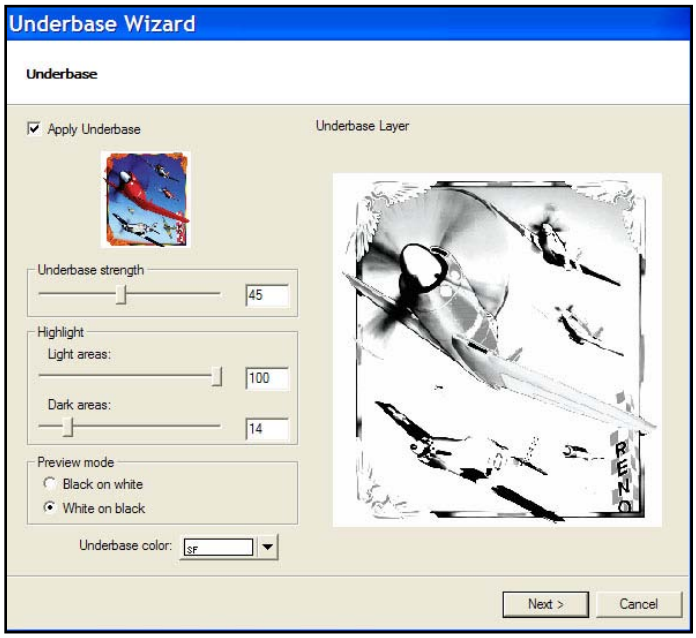
Select the image with the *Selection* tool and click on the *Underbase Wizard* icon. The first screen you see will give a sampling of what the *Underbase* will look like. The default *Preview Mode* is **Black** *on White*. You really want to see how it will look with White ink on a **Black** shirt, so change this to *White on* **Black**. Make sure to pick the *Underbase* color of White.

You have a lot of control over the *Underbase*. You can control the *Strength* and make the entire layer solid White. You can also make the *Underbase* a greyscale image that lets the shirt breath.

Keep in mind, you are looking at how the *Underbase* will print on a dark shirt so, this may take a little practice. When in doubt, apply more *Underbase*, but try to avoid Underbasing areas of the image that will be dark or **Black**.

Using a Clipping Path

The White canvas of the original artwork is the next concern. If you are viewing the image with *White on* **Black**, you will note that there is White ink AROUND the image. FastARTIST is just doing what it is told. Any area of "White" is being printed with White. You must REMOVE THE OUTSIDE EDGE OF THIS IMAGE.



This is called *Clipping;* in computer graphics it is commonly called *Clipping Path*. A *Clipping Path* finds the outside edge of a design and removes it. It is obviously easier to clip a hard edge than a soft edge. The Air Show image is perfect for removing the outside edge using the *Clipping Path* method.

Applying a Clipping Path

1. Go to the *Transform* > *Contour Object* to create a Clipping Path for an image.

2. Select *Clip Bitmap*. Select *Invert Bitmap for* **Black**. Leave unchecked the option for White.

3. Click on *Cut inside bitmaps*

4. The two buttons on the *SmartBar* just left of the *Corner Styles* selections provide the clipping options. Either the *Outside* or both *Inside* and *Outside* can be selected by engaging or disengaging the buttons.

5. Select Apply

You can see that *Clipping* would be harder if we were using the Cowboy image because it might give us a harder edge on what should be a soft edged image. When dealing with soft edged images, you'll just have to experiment.

Creating a Highlight

The *Underbase Wizard* will also create a *Highlight White*. A *Highlight* will print on top of an Underbase White in areas that are very light in color or are White. The *Highlight White* prints at the SAME TIME as you print the CMYK colors.

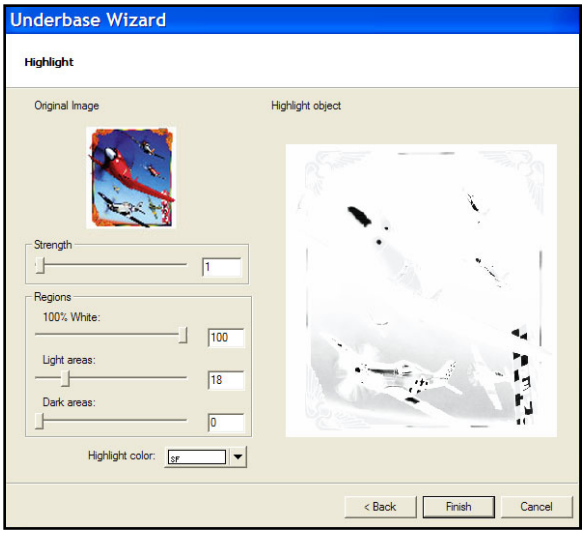
The next window you get will ask you if you want a Highlight. If not, check No Highlight. If you want it to print with the CMYK colors this is called Overlap

Highlight. You can let FastARTIST do an Auto *Highlight* but you might feel more comfortable if you have more control.

Remember that you do NOT want too much *Highlight White* printing on other colors. However, you do want a *Highlight* to print where there is White in the design.

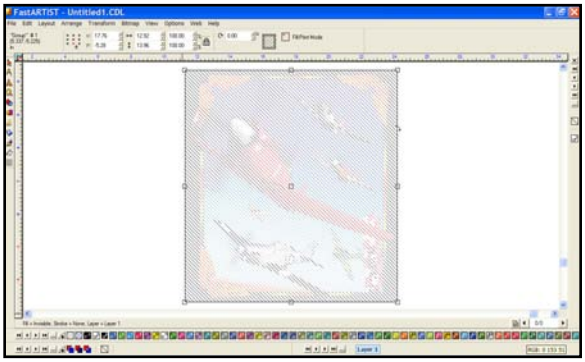
IMPORTANT POINT

Due to the nature of displaying images, the Highlight will display in negative of how it will print. Any areas that are Black are actually where the White ink will print! Also, the Highlight display will NOT take into account the Clipping Path. This is just for the display on the monitor. The outside edge of the image will be clipped if you choose Clipping Path.

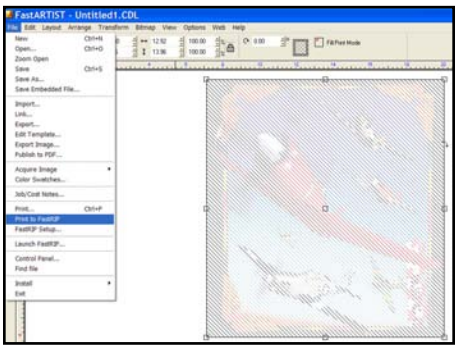


Preparing to Print

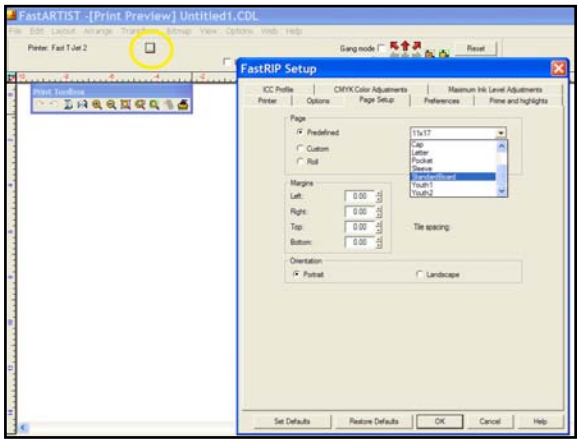
FastARTIST now places the image on the main page with a sampling of the final printed image. To represent the Underbasing and Highlights, it uses diagonal lines across the image. Yes, the image is there, you just can't see all of it. You are now ready to print!



From the *File* menu, select *Print to FastRIP*. This will bring up the *Print Manager*.

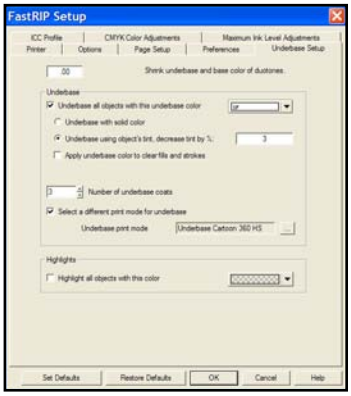


Checking Preferences in FastRIP Setup



You need to check the *Preferences* in *FastRIP Setup* for a final verification of setup, printer selection and page size. Go to the *File* Pull-down Menu and select *FastRIP Setup* or click on the three little dots in the icon on the *SmartBar*.

- **Check the Page Size**
  Under the *Page Setup* tab, verify that the *Page Size* is set for the Shirt Board you are using .



- **Set the Amount of Passes**
  Make sure to tell FastRIP how many passes to make when it prints the Underbase in the *Underbase Setup* tab. You should also choose the correct print mode. If you want to make the Underbase a little skinnier, so it won't bleed around images, you could also tell it to reduce the object's tint by 3%.

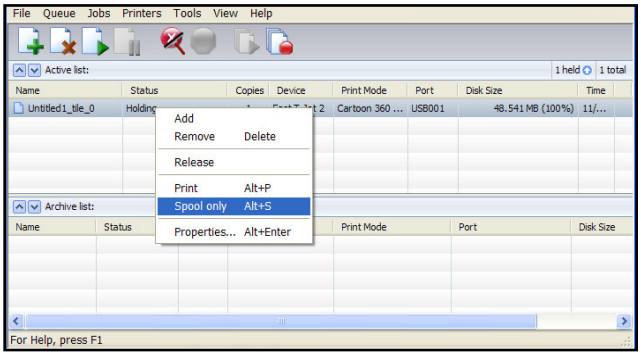
IMPORTANT POINT

You DO NOT have to check Underbase all objects with this Underbase color unless you want to overwrite what the Underbase Wizard has done. All you need to tell the Underbase Setup tab is how many passes to make.

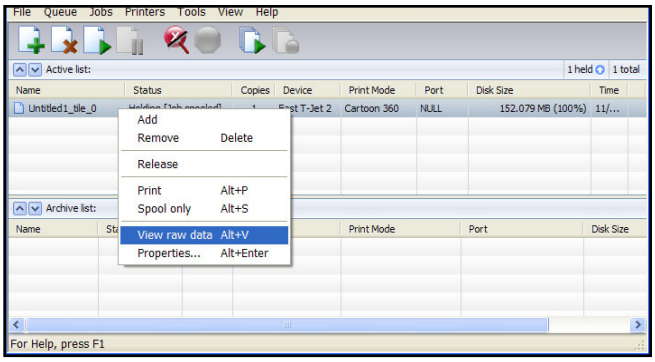
- **Choose the Correct Printer**
  Make sure to check *Hold Job* so the job will NOT print before you get a chance to *View Raw Data*. Choose the *Print Mode* and click on *OK*. Make sure the image is in the correct location on the page and press the *Print* icon.

Viewing the Image in FastRIP

FastRIP will open and the image will say *Holding*. By *right clicking*, you can select the *Spool Only* option.



When the job is done spooling (ripping and getting ready to print), *right-click* and choose *View Raw Data*.



Here you can change the background color to **Black** and see how each *Layer* (printer head pass) will look. Check to see if the *Underbase* looks correct. Here you will see any errors or improper settings derived from *FastRIP Setup*.

If everything is correct, you are ready for output. With a shirt that should be pretreated, dried and loaded, right click on the job and select *Print*!

Two Versions of Your Artwork May Be Needed

It is important you have two versions of the artwork for more complex images (with lots of interior areas) or artwork with soft edges. If you are going on any other color but **Black**, you need to have a version of the artwork with a White canvas and a version with a **Black** canvas. The "White" version is used for the colors and the "**Black**" version is used for the *Underbase* and highlight.

IMPORTANT POINT

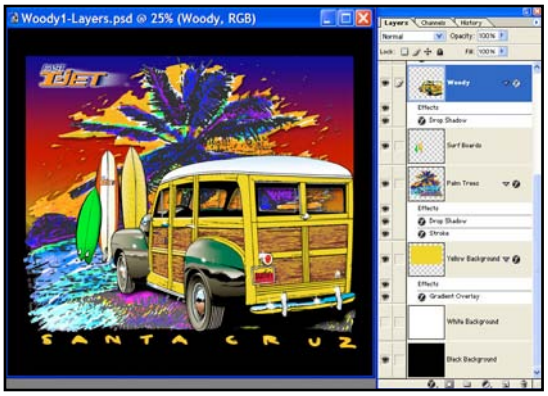
You only need two versions if you want to avoid the problems associated with using a Clipping Path because of interior areas that need shirt color or DO NOT need White.

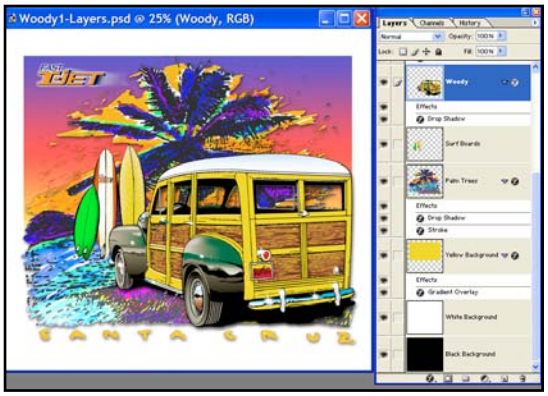
These files must be identical in size and resolution. Using the FastARTIST *Underbase Wizard,* you can automatically create the Underbase file and the *Highlight* file without using a *Clipping Path* routine. Then, all you have to do is tell FastRIP how many passes you want of the Underbase and if you want a Highlight.

- **Using Photoshop Files**
  If the image came to you as a PSD file with a transparent background, it is a simple matter of duplicating the file and creating one image with a White background and one image with a **Black** background.

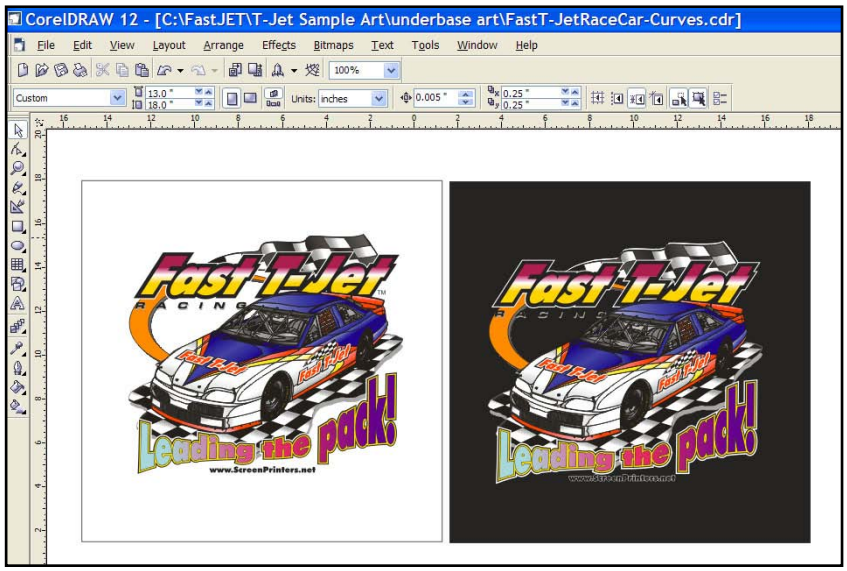
NOTE

For an image to Import *correctly into FastARTIST from Photoshop, it must be saved as a single layer PSD file without a background layer. Upon removing the background layer, your image will have a grey and White checkerboard background signifying transparency.*





- **Using Vector Files**
  If the image was made in a vector program like CorelDRAW or FastARTIST, you can duplicate the image and place a **Black** background around one version and a White background around the other. *Export* each file as a JPEG, TIFF or other format that can be *Imported* into FastARTIST.


CorelDRAW 12 - [C:\FastJET\T-Jet Sample Art\underbase art\FastT-JetRaceCar-Curves.cdr]
File Edit View Layout Arrange Effects Bitmaps Text Tools Window Help
Fast T-Jet
Leading the pack!
www.ScreenPrinters.net

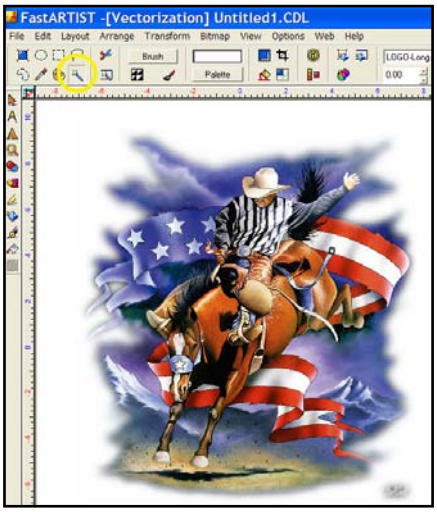
Creating Print Files with FastARTIST

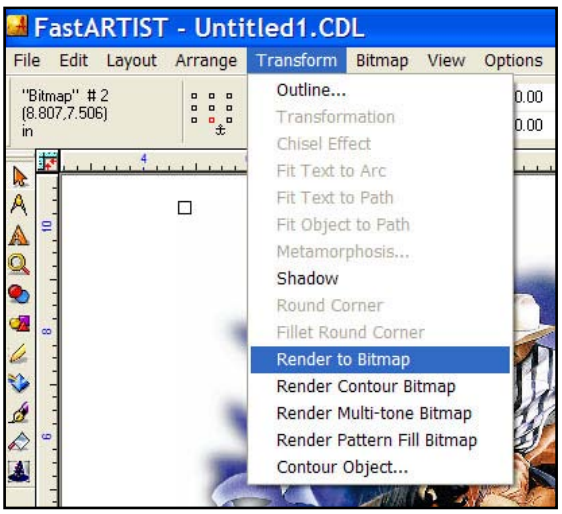
In many cases, the customer will NOT know what you need. They will give you artwork with the actual shirt color in the image. However, in most cases you will get artwork with White in the canvas area. You need to learn how to quickly replace the White in the canvas with **Black**. Remember, you don't want to replace all the White. The design may have White in the image. You just want to get the image looking the way it would look if printed on a **Black** shirt.

FastARTIST has bitmap editing tools that will help. If the image has a soft edge, it is difficult to put White around it. The only real way to make the edges soften going out to **Black** is to use the *Airbrush* tool and actually paint around the image. Doing this will help you encourage customers to give you the correct art.

Using the Magic Wand

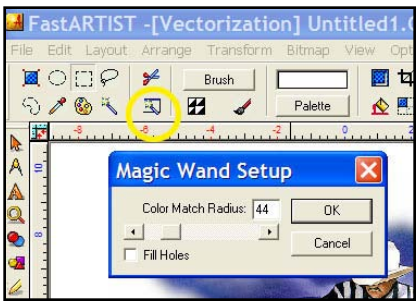
FastARTIST has a feature also found in Photoshop called a *Magic Wand*. To get to the *Bitmap Editing* tools, *double-click* on the image. If this does not change your *SmartBar* to the *Bitmap* tools, you need to convert the image to a Bitmap. From the *Transform* menu, click on *Render to Bitmap*.





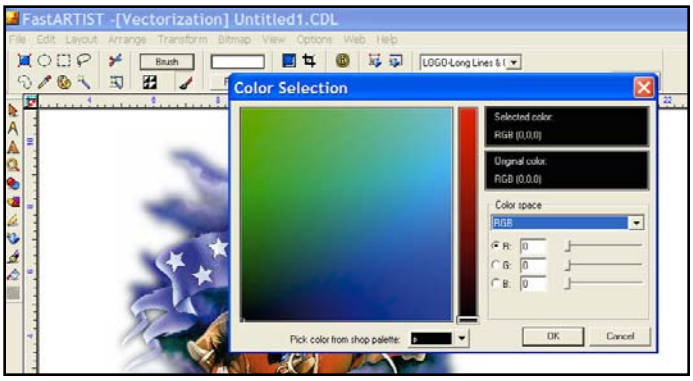
With the *SmartBar* in *Bitmap Editing Mode*, you can see there are many more tools normally associated with Bitmap images.

The *Magic Wand* tool is designed to select areas of an image that have a similar color. You can adjust the strength of the *Magic Wand* in the *Magic Wand Setup* window. This is called the *Color Match Radius*. For now, set the number low.

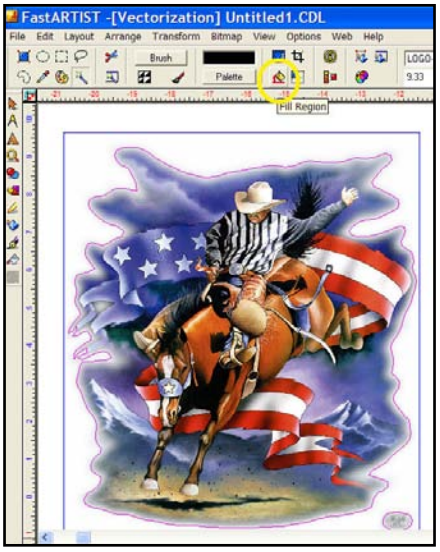


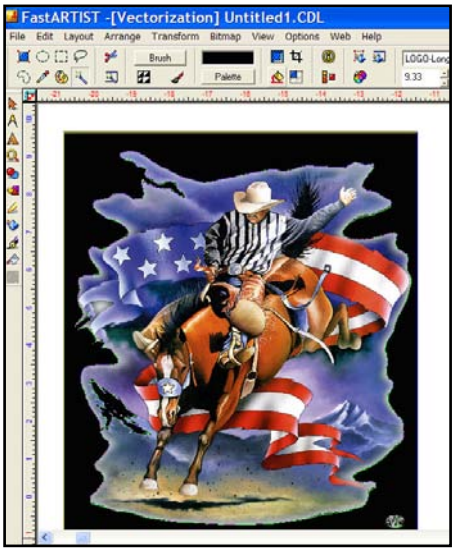
Before you select an area to fill with **Black**, you need to change the *Color Palette* to **Black**. *Double-click* on the Palette swatch (White rectangle) and choose **Black**. Click on *OK*.

Move the *Magic Wand* near the edge of the image and left click. Depending on the *Color Match Radius strength*, the *Magic Wand* will search around the image (it will not do interior areas) and select the edge. If the *strength* is too low, it will find only a White edge.



You will now see a line around the image. This is called a *selection*, which can be filled with color. By clicking on the *Paint Bucket* icon, the selected area will be filled with **Black**.





If the image has interior areas that need to be changed to **Black**, use the *Magic Wand* the same exact manner and work your way through all the interior sections.

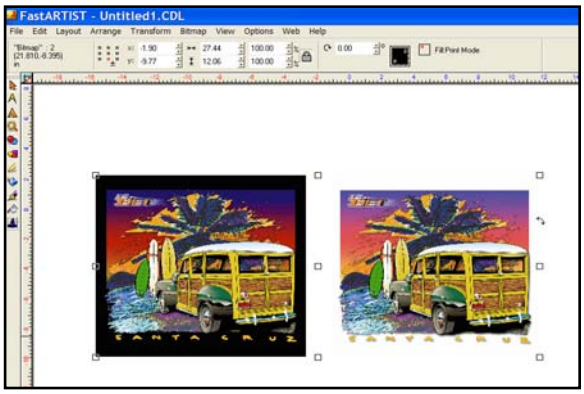
NOTE

You should always be using a working copy of any image so you don't ruin the original. When you have completed any changes or modifications, save the new image under a name that is different that of the original artwork.

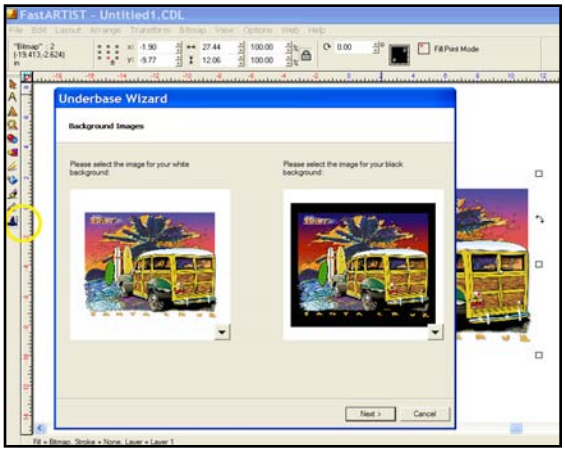
Using the Underbase Wizard on White and Black Files

Once you have both versions of an image prepared, import them into FastARTIST and let the *Underbase Wizard* work both at the same time. With two files open on the screen, drag the cursor to encompass both to select them. Or, click on one image, hold down the *[Shift]* key and click on the other.

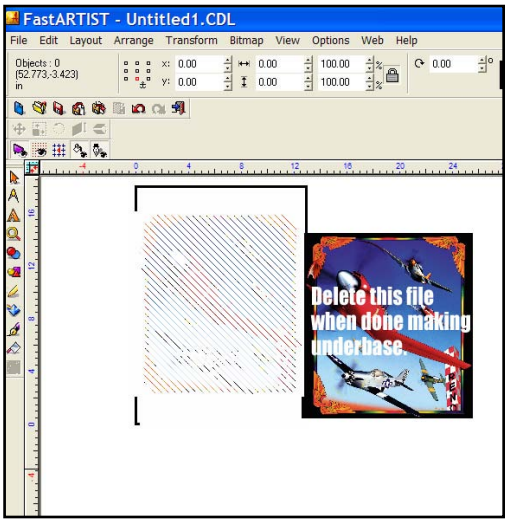
1. Select the *Underbase Wizard* icon from the toolbar and you will be prompted to designate which file is for a White shirt and which file is for a **Black** shirt.



2. When you get to the *Clipping Path* page, do not check it. Having two images makes things very simple.



3. When you are finished with the *Underbase Wizard*, this file is ready to print, except that FastARTIST will still be showing the "**Black**" version of the artwork. It is done using this file for the Underbase calculations so you can delete it.


FastARTIST - Untitled1.CDL
File Edit Layout Arrange Transform Bitmap View Options Web Help
Delete this file when done making underbase.

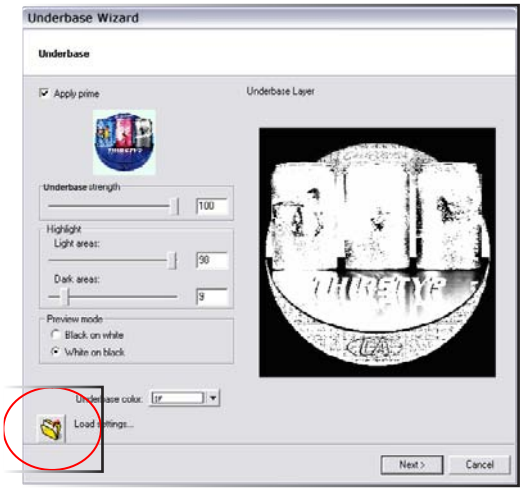
4. **Press *Print!***

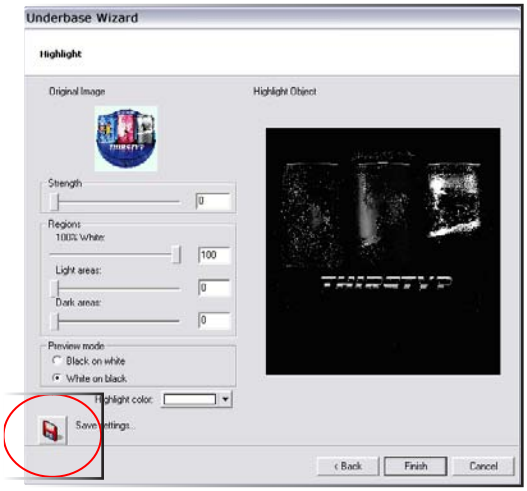
Additional Underbase Wizard Options

Creating the ideal *Underbase* is a key component to the quality of the print. Due to FastARTIST's ability to import images with transparency, there are three additional options for the *Underbase Wizard*.

IMPORTANT POINT

When selected, the Underbase/Highlight Wizard will take you through a series of dialog boxes with an additional Save/Load Settings option located in the lower left corner of the dialogue box. This Save/Load option would be utilized if you wish to recall previously configured Underbasing settings or if you wish to save a new configuration for future use.





The three icons that represent Underbase and Highlight presets will run automatically with one click of the mouse. The order from left to right is as follows:

- **Heavy Underbase Wizard**
  This option produces a heavy Underbase with a Highlight pass.

- **Normal Underbase Wizard**
  The option creates a Normal Underbase with a Highlight pass.

- **Last Setting Underbase Wizard**
  The fourth icon will automatically run the last configuration you created when you ran the full Wizard (first icon).

IMPORTANT POINT

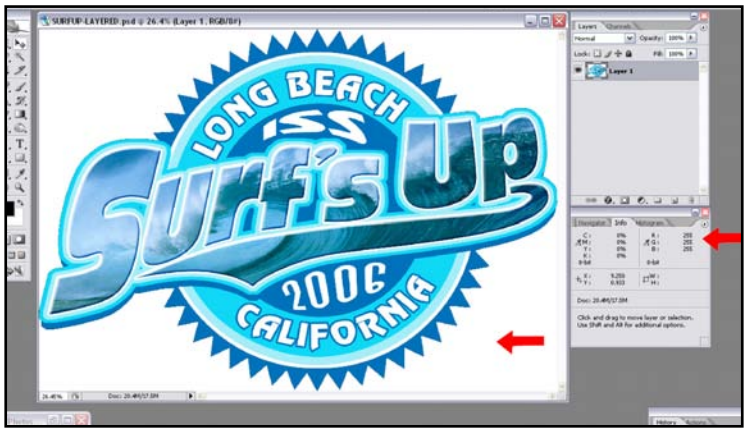
*The three Wizard options listed above will not display any dialog boxes unless two bitmaps are selected (**Black** and White mask versions of an image). In this case, you will be prompted to identify which is the image with the **Black** background and which is the image with the White background.*

Printing From Other Graphics Programs

Adobe Photoshop- Design Setup

When printing a design from Photoshop, FastRIP will determine which components of the image are pure White and configure the output so that those areas do not receive an Underbase (RGB 255,255,255 or CMYK 0,0,0,0). If you wish to override these settings, set these areas to a slight tint of off-White (RGB 254,254,254 or CMYK 1,1,1,1).

In this first example, arrows identify that the "N" in California has been set to RGB 254,254,254, meaning that it will print White.

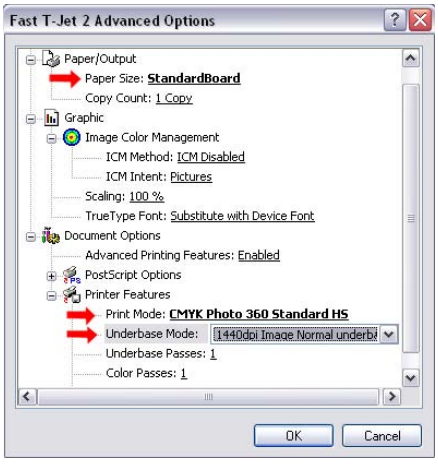


The arrows in this second example show that the background is set to RGB 255,255,255, making the background transparent when printing with FastRIP.

IMPORTANT POINT

Color Management ***must be turned OFF before sending the image to print.*** **Color Management** ***is found in the*** **Print with Preview** ***window. Go to*** **File > Print with Preview.** ***For more information and instructions on how to Print from Photoshop, refer to Chapter 9 of your FastARTIST User's Manual.***

Printing from Adobe Photoshop

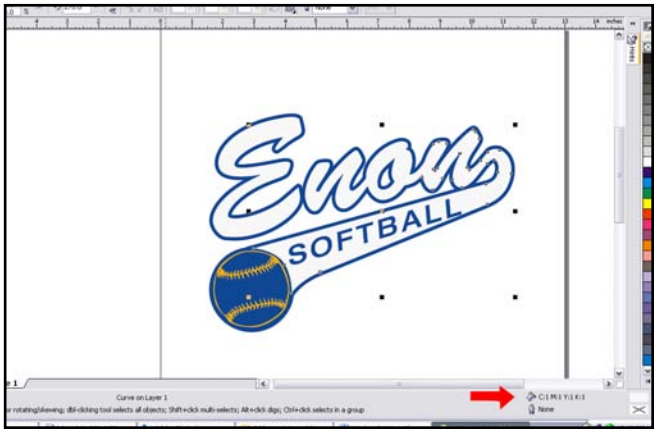


Go to the *File* menu - *Print with Preview*. Click *Page Setup*. Click on *Printer*. In the *Page Setup* menu, select your printer. Click on *Properties*. Click on *Advanced*. Set the *Page Size*. Go the *Printer Features* section. Bring the *Print Mode* menu down to select the **Color Print Mode**. Bring the *Underbase Mode* menu down to select the **Underbase Print Mode**. Set the number of ink passes for *Underbase* and color. Click on *OK* in *Advanced Options*. In *Document Properties* set to *Landscape* or *Portrait* for orientation. Click on *OK*. Click on *Print*.

Select either Image Heavy *or* Normal *as your Underbase Print Mode.*

CorelDRAW Design Setup

When designing in CorelDRAW, set areas where no Underbase is desired as pure White (RGB 255,255,255 or CMYK 0,0,0,0). To print an area as White, set the area to a slight tint of off-White (RGB 254,254,254 or CMYK 1,1,1,1).



In this first example, the selected area is set to CMYK 1,1,1,1, which is recognized as

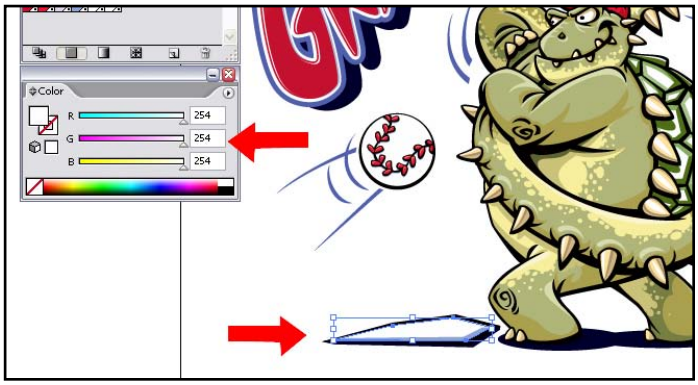
White and will receive an Underbase when printed through FastRIP.

When working with vector images, if you use *Named Spot Colors,* use the *Spot Color* White and FastRIP will create a Highlight White when it prints the Top Color pass. This means an Underbase will be applied and then Highlight White will be printed in conjunction with the Top Colors. In this example, the arrow is identifying the use of Spot White.

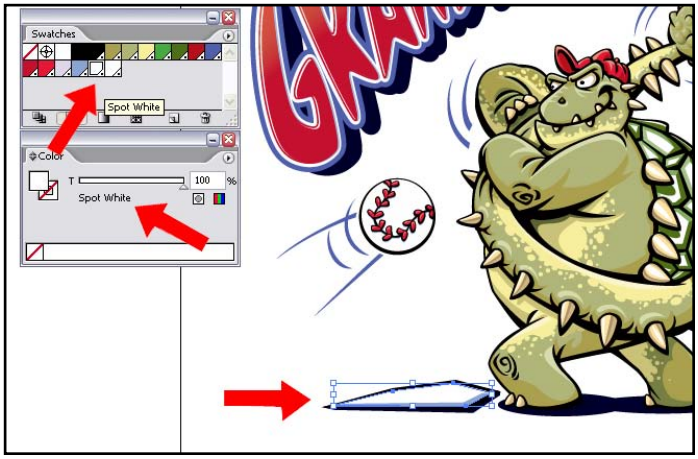
Adobe Illustrator – Design Setup

When designing in Adobe Illustrator, set areas where no Underbase is desired as pure White (RGB: 255, 255, 255 or CMYK 0, 0, 0, 0). To print an area as White, set the area to a slight tint of off-White (RGB: 254, 254, 254 or CMYK 1, 1, 1, 1).

In this example, the selected area is not a pure White (RGB 254,254,254), meaning that the image will print White.



When working with vector images, if you use *Named Spot Colors,* use the *Spot Color* White and FastRIP will create a Highlight White when it prints the Top Color pass. This means an Underbase will be applied and then Highlight White will printed in conjunction with the Top Colors. In this example, the arrow is identifying the use of Spot White.

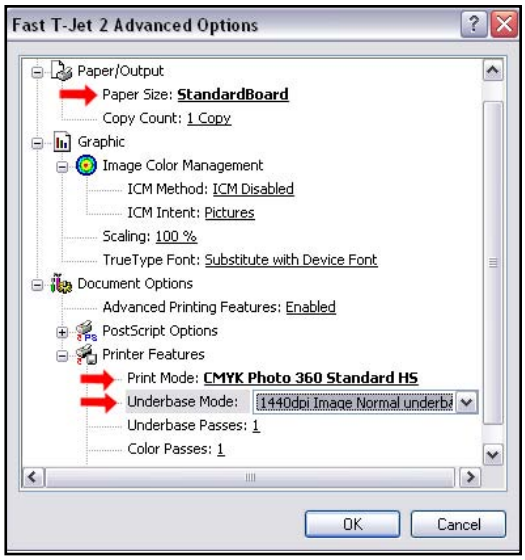


Solid Spot Colors - No Gradients

Go to *File* > *Print* and select your printer from the *General* tab. Click on *Properties*. Click on *Advanced*. Set the *Page Size* and go to the *Printer Features* section to access the *Print Mode* menu. Select your desired **Color Print Mode** and use the *Underbase Mode* menu to select your preferred **Underbase Print Mode**. Set the number of ink passes for both the *Underbase* and Top Colors. Click on *OK* in *Advanced Options*. In *Document Properties* select *Landscape* or *Portrait* for orientation and click on *OK*. Click on *Print*.

Gradients, Gradients with Solid Spot Colors, Bitmap with Vector Objects

Go to *File* > *Print*. From the *General* tab, select your printer and click on *Properties*. Click on *Advanced* and set the *Page Size*. Go to the *Printer Features* section and access the *Print Mode* menu. Select the **Color Print Mode.** Use the *Underbase Mode* menu to select the **Underbase Print Mode**. Set the number of ink passes for both *Underbase* and color and then click on *OK* in *Advanced Options*. In *Document Properties*, select *Landscape* or *Portrait* for orientation and click *OK*. Click on *Print*.



IMPORTANT POINT

For more information on designing and printing vector or bitmap images, Spot Colors and gradients, consult your Chapters 4-6 of this Manual and the Help sections of your graphics application.

A Final Note

By using a third party graphics application to print your images, you sacrifice several features offered by FastARTIST. FastARTIST was DESIGNED to print images on garments; applications like Photoshop and CorelDRAW were not. If you do not *Import* your images into FastARTIST first, you cannot utilize the *Highlight White* option. Additionally, you will not be able to access the *Highlight/Underbase Wizard* and its *one-click* options. These can complete the entire *Highlight* and *Underbase* functions with one click of your mouse button, saving you a lot of time compared to configuring your Underbase manually.

Chapter 10

New Features of Version 2.0

In FastARTIST 2.0 there are many great new features, two of the most important ones are *Super Size Image* and *Fluid Mask*. Both of these are for working with bitmap images and together they can make any image look good and make the process of creating a white underbase easy for anyone to do.

What is covered?

- **Super Size Image**
  Despite the trend in high quality digital cameras, we are still being supplied poor quality artwork for printing onto T-shirts. Images for web graphics are rarely good enough quality for reproducing on a T-shirt, but all too often all that is supplied.

  The new SuperSize Image feature can dramatically improve image quality in seconds, saving you time and money.

- **Fluid Mask**
  Fluid Mask is a new feature that makes creating an underbase for any bitmap image as easy as painting by numbers. It can be used for simple and complex graphics, its very easy to learn and can be used by complete novice, but also has settings and features that will satisfy the most advanced users. With *Fluid Mask*, you need no longer use the underbase wizard. While this feature is still available, its more for backwards compatibility and you should find that *Fluid Mask* can give you more control and better results. With *Fluid Mask* you only ever need one copy of the image (not the black and white masks) and *Fluid Mask* will create the transparent areas for you automatically. FastARTIST can then convert that transparency into a perfect underbase.

- **Vectorization Wizard**
  Previous versions of FastARTIST included Vectorization tools, but version 2.0 offers the Vectorization Wizard as well, which lets you control color, contrast, brightness etc. to get the vectorization you want and need.

- **Photshop Plug-ins: KnockMeBlackOut and KnockMeColorOut**
  FastARTIST 2.0 comes with 2 very powerful Photoshop tools that will knock out the background color of an image saving hours of unnecessary work. Refer to ***Chapter 12 - Photoshop Plug-ins*** for details.

Super Size Image Plug-in

Super Size Image is a new tool added to *FastARTIST 2.0* that allows you to enlarge smaller artwork to normal print size and resolution, easily and effectively. There are many clients who may provide you with a tiny JPEG or web graphic and expect you to print high-quality with the image. Although the image may look crisp on screen, when enlarged from 72 dpi to 200 - 300 dpi, the image will print very fuzzy.

About Image Enlargement/Resolution

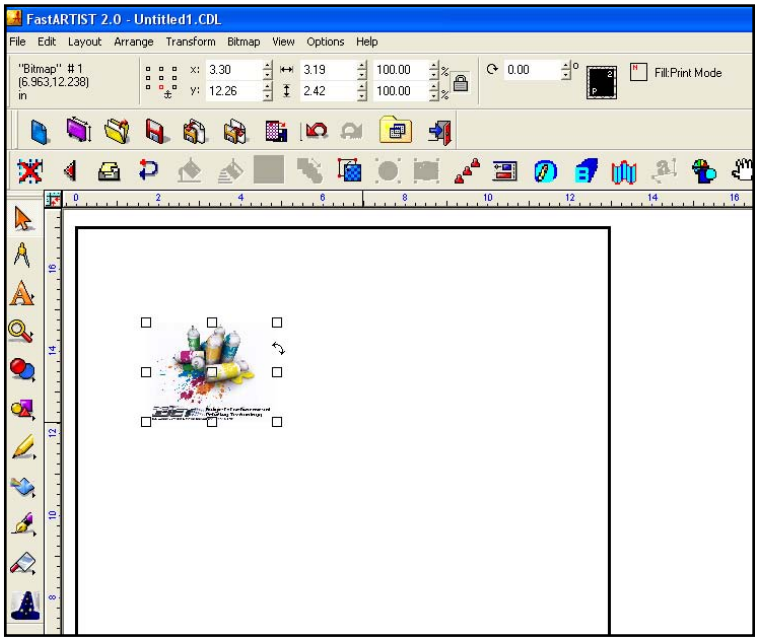
Below is a prime example of the sort of web graphic sometimes supplied for printing on to T-Shirt, this 5K jpeg image might view OK when it's a small Icon in your web browser, as you can see when blown up for T-Shirt graphics it far from acceptable quality.

This image has been enlarged from 3"wide to 9" wide at 250 dpi. The enlarged image would look and print even worse if the dpi was 72 (normal screen resolution). We recommend a final print size graphic with a resolution of 200-300 dpi for outstanding prints.

Using Super Size Image

Super sizing an image is done in a few simple steps:

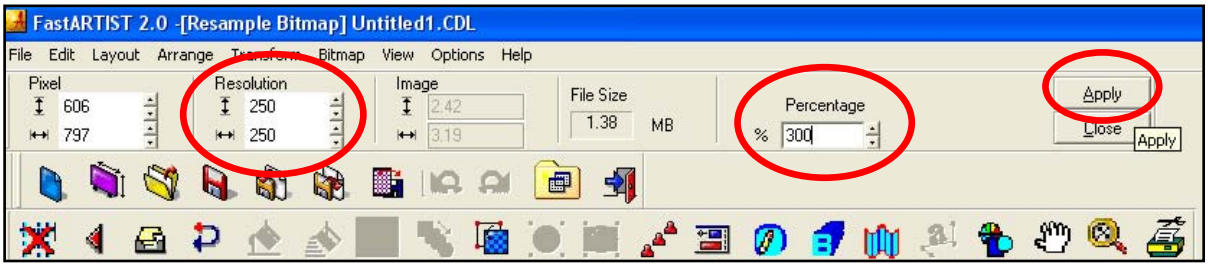
1. Import your image into *FastARTIST 2.0* using the ***File>Import*** option from the *Pull-down Menu*.



2. Determine the size you will need the imported image to be. In this example, the spray can art is a 3-inch JPEG image with a resolution of 250 dpi. We won't adjust the resolution, only the size in percentage. For a large print, plan on enlarging an image like this example, 300%, enabling the image to be enlarged up to 9 inches wide (or 3 times the original size).

   Another options is to enlarge the original JPEG to the needed print size and then running Super Size Image, omitting the last step of enlarging the Super Sized Image file. For this example, we'll first run the Super Size Image based on the amount we would need to enlarge the original image.

3. Next, select ***Bitmap>Super Size Image*** from the *Pull-down Menu*.

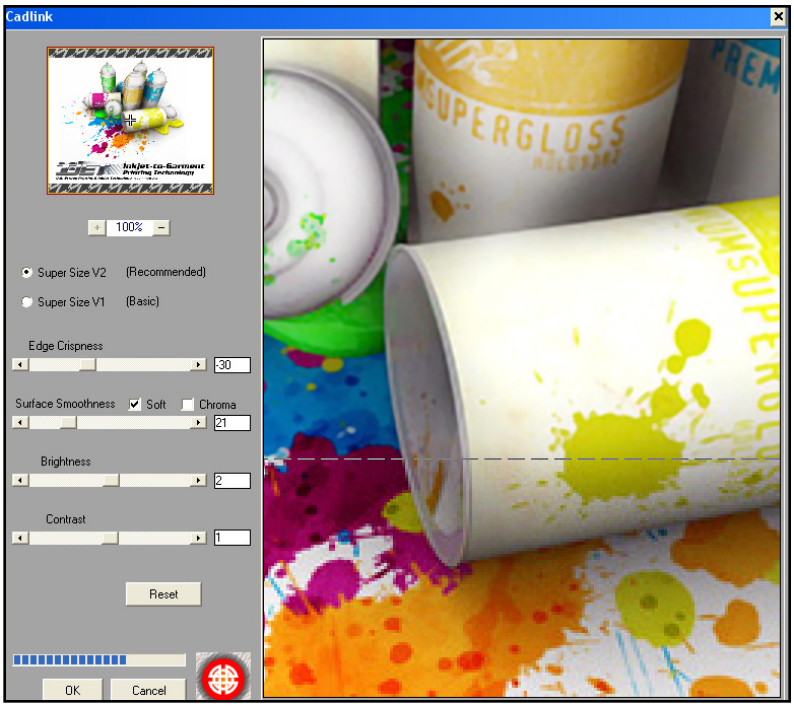


   Set your preferred resolution (if needed) and percentage of enlargement in the *SmartBar Menu* at the top of the screen.

   For this example, we do not need to adjust the resolution, but need to enlarge the image 300%. The value entered here will control the amount of upsampling needed in the following steps.

4. Click ***Apply***.

5. Adjust your settings in the settings window.



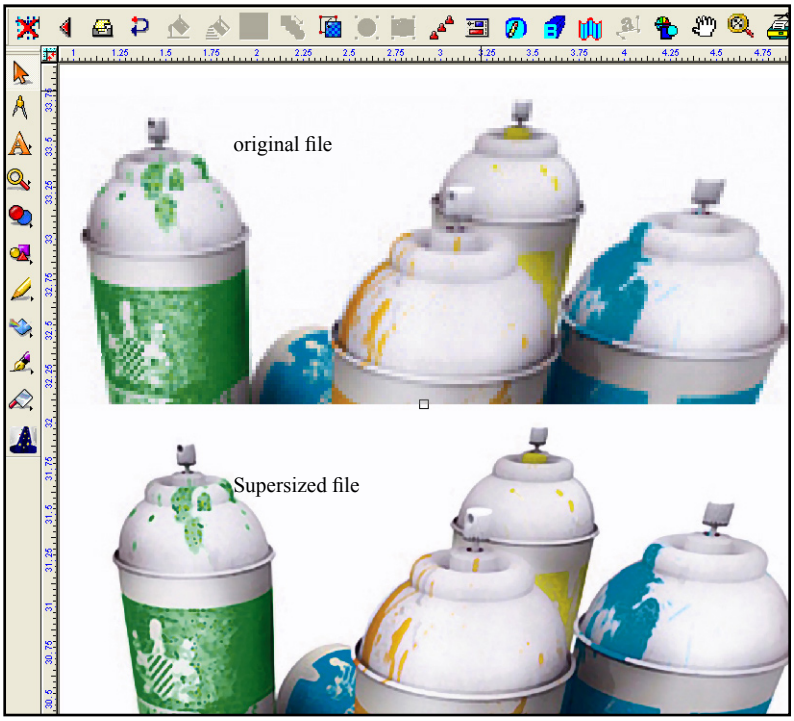
- Each time you adjust a setting, the preview window will update the preview letting you see the results..
- Use the + and – icons to zoom in and out
- By clicking in the small preview you can position the current zoom of the big preview.
- If you click and hold the left mouse button and drag in the big preview, you can pan around in a zoomed view.
- To reset the settings you entered, click ***Reset***.

NOTE: This dialog always remembers your last settings used, so it's a good idea to click on Reset first to get back to default values.

6. When finished, click ***OK***.

7. The next step is re-sizing your image to the needed size. This will of course, depend on the amount you enlarged the art in step 2. NOTE: if you re-sized your image prior to running Super Size Image, you will not need to re-size.

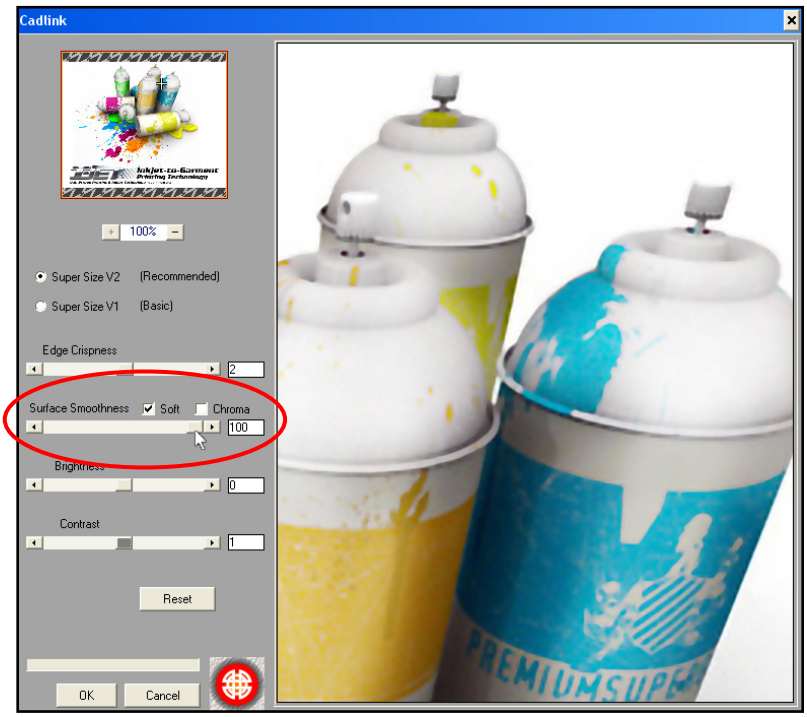
Shown here are the original and adjusted files, both enlarged to the needed print size in FastARTIST.



Advanced Controls

With the default settings the spay can image looks better, but if you were Super Sizing a more photographic image, there will be more in-depth settings to allow the image to print excellent on a T-shirt.

There is a lot of artifacts (distortion of color) that has been caused by the jpeg compression and anti aliasing effects created when its been reduced in size. To fix these we will use the Surface smoothness and Soft controls.



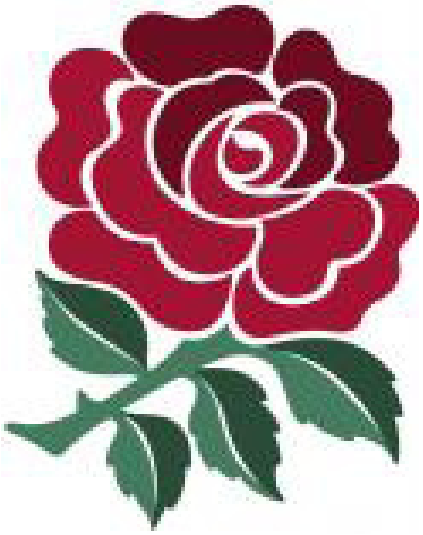
Click on the soft checkbox and increase the surface smoothness to 100 and you will see how it eliminates all those artifacts.

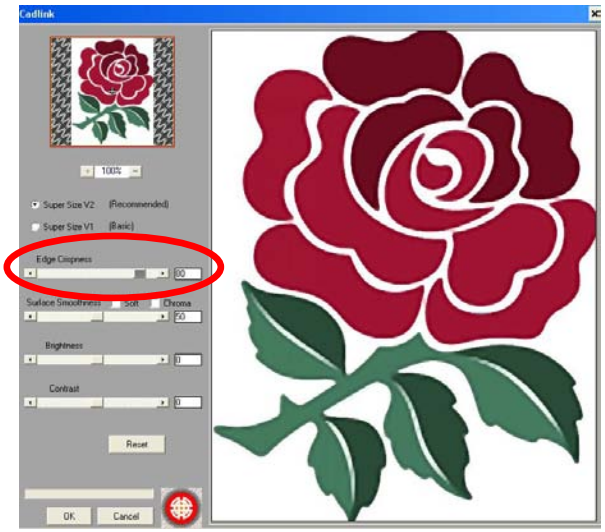
You can adjust the Edge Crispness to sharpen the image more (positive) or negative to blur. For this sort of image I would leave it on 0 and just click OK to apply the changes to my original image

Below is an example of using soft and surface smoothness to heal poor quality images even with pictures and complex flesh tones.

BEFORE AFTER

For other types of images (vector looking graphics), the ***Edge Crispness*** can bring back the clean hard edges.





The ***Soft*** checkbox, ***Surface Smoothness*** and ***Edge Crispness*** are the three main controls and you can quickly master these to return low quality images to their former glory.

Super Size Image is also part of the new vectorization wizard, the brightness and contrast controls can make a significant change to your original colors and should only be used when using the Super Size Image for vectorization.

Fluid Mask Plug-in

With *Fluid Mask*, you need no longer use the *Underbase Wizard*. While this feature is still available, its more for backwards compatibility and you should find that *Fluid Mask* can give you more control and better results. With *Fluid Mask* you only ever need one copy of the image (not the black and white masks) and *Fluid Mask* will create the transparent areas for you automatically. FastARTIST can then convert that transparency into a perfect underbase.

Fluid Mask is an advanced program for cutting out areas of an image and by integrating this into *FastARTIST* it creates an automated work flow for editing images to be printed onto colored shirts. It will save you hours of work. Partial transparency is also used on complex edges to blend these into the shirt and can also be used as a means of advanced trapping.

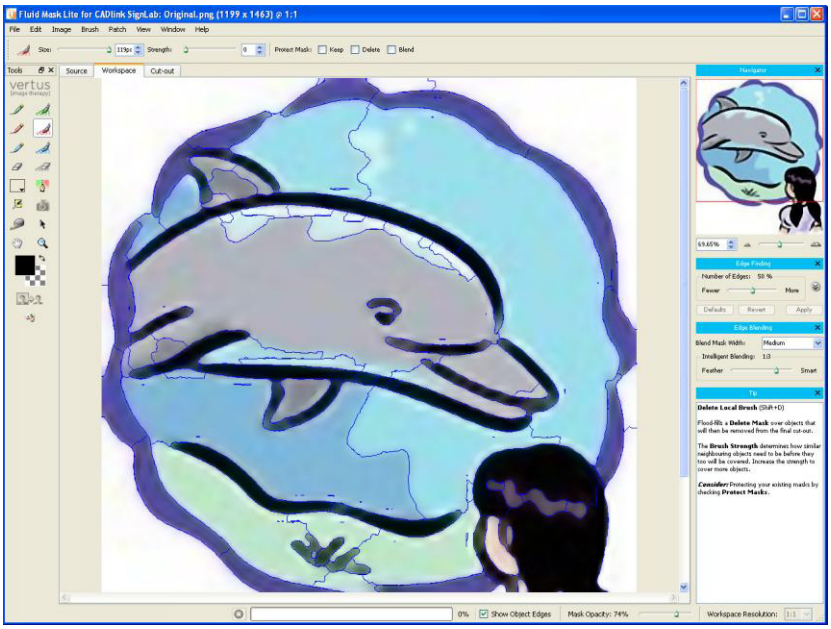
Fluid Mask is also available as a plug in for *PhotoShop*, written by a company called *Vertustech* which provides an extensive range of training videos on their web site. http://www.vertustech.com. Users who would like to use *Fluid Mask* in *PhotoShop* should upgrade to the regular version.

Getting Started

1. First, import the desired image onto the *FastARTIST* workspace.

2. With the image selected, click on *Fluid Mask* from the ***Bitmap Pull-down Menu***.

When *Fluid Mask* first launches it scans the image and breaks it down into a series of regions, each region is separated by the blue lines. The time it takes to do this, will depend on the size and complexity of the image and how fast your computer is.



Adjust Edges

You can increase and decrease the number of edges using the ***Edge Finder Slider*** on the right hand side of the window. You can imagine this as painting by numbers and the more you increase this by, the more regions there will be for you to paint.

Brushes

On the left hand side is the tool box, at the top you have your green, red and blue brushes.

- Green is for Keep
- Red is for Delete
- Blue is for Blend (or "Not Sure Brush")

Each brush comes in two types or settings; the "***Exact Brush***" and the "***Local Brush***".

The "***Exact Brush***" (on the left) works like any other paint brush tool and only effects the areas you brush holding the left mouse button down.

The "***Local Brush***" will fill the whole region with one click of the brush anywhere in the region.

NOTE: You can control the brush size with the brackets; [for small and] for bigger or by using the brush size slider in the top menu bar..

NOTE: When using the local brush, you can control how the local brush effects similar neighboring regions using the strength slider in the top menu bar.

Zoom

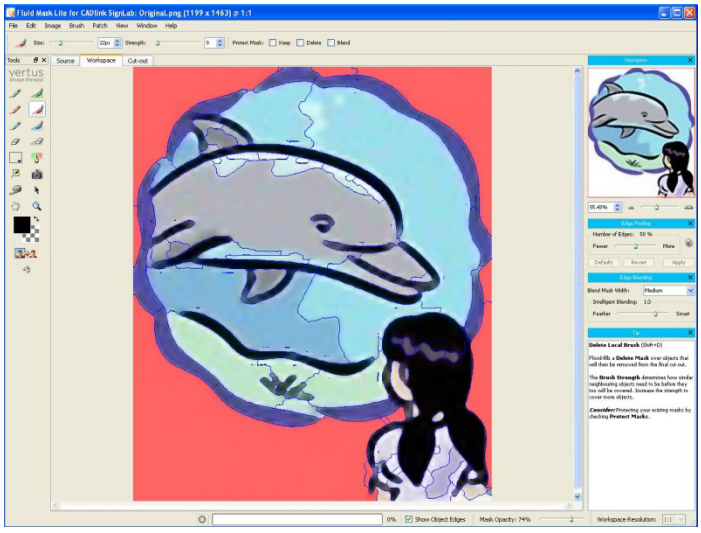
The Magnifying Glass tool is used to zoom in and out. Holding Alt on your keyboard changes it to zoom out.

NOTE: you can also Zoom in and out using Control + and Control –

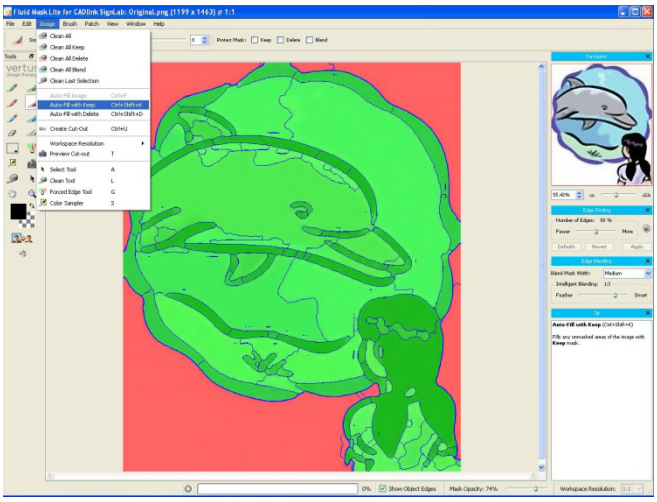
Making and Deleting Selections

1. Start by selecting the Delete local brush (the red brush on the right of the tool palette).

2. Next, click in the regions you want to remove and they will turn red. Make the brush smaller for small regions. Control + Z will act as an undo if you click in the wrong area.



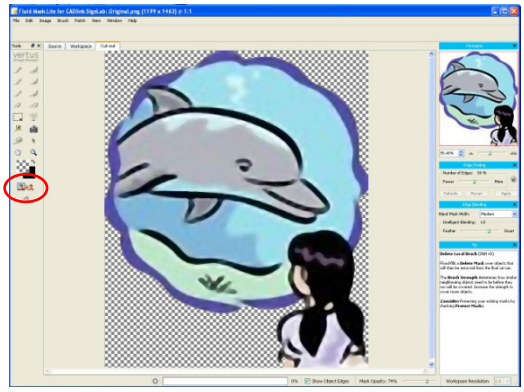
3. Select the Keep Area.
   Once you have selected all the areas you want to remove, you can quickly select everything else as what you want to keep. From the *Image Pull-down Menu* select ***Auto-Fill with Keep.***



NOTE: Holding the Spacebar down will enable you to move around the preview window freely (rather than selecting the Hand Tool constantly). Also, if your mouse has a scroll wheel, use it to operate the scroll bar.

Check and Save your Results.

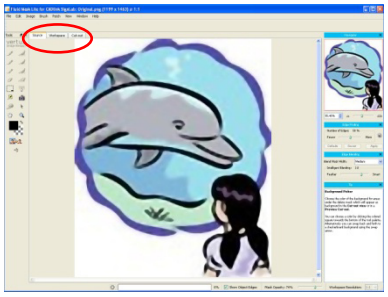
To see the results, click on the ***Cut Out*** icon at the bottom of the *Tool Menu*.



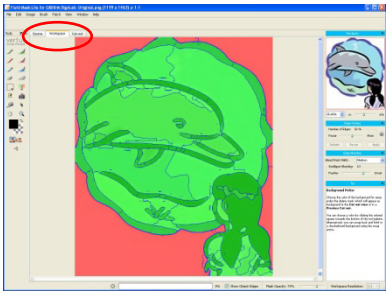
The cutout preview is initially displayed as a transparent background (displayed as a checker board), but you can simulate the shirt color by clicking on the color picker icon.

This example shows how the image will look on a black t-shirt, but by clicking on the black square in the icon it will display a color palette and you can select any color to use as a shirt color.

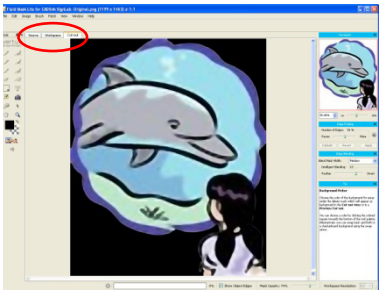
You can click between three views:



The original source image.

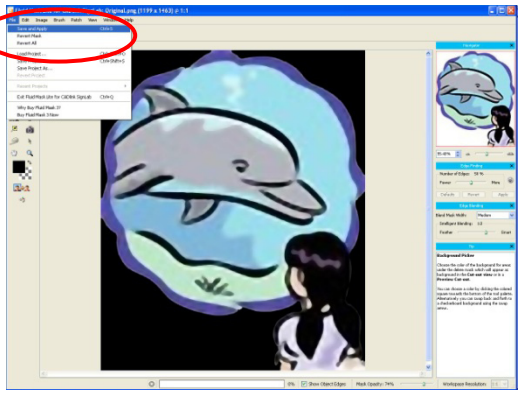


The workspace (masked version)



The final cut out version
(as it will be seen on the t-shirt)

By clicking on the individual tabs labeled ***Source, Workspace*** and ***Cutout***, you can view each individual view of the process in the *Preview Window*.

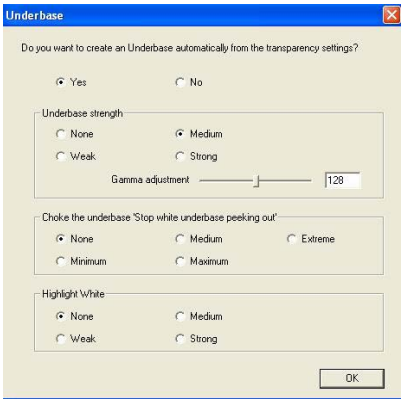


To apply the cutout and create the underbase select Save and Apply from the File menu.

Underbase Settings

Once you have clicked Save and Apply you are prompted with a dialog window, asking if you would like to automatically create the underbase from the transparency settings. By clicking Yes and selecting a few options, the image will be converted into image + underbase ready for printing.

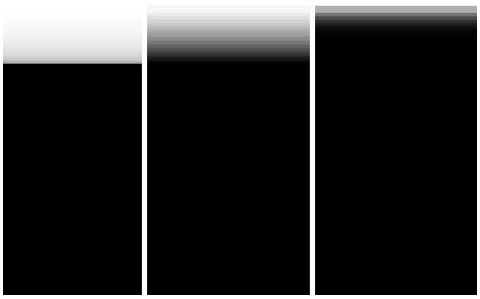
Underbase Strength: This has 4 settings for determining the underbase to be created.



- **None:** doesn't create an underbase. Typically, this setting would only be used if you only want to print a highlight white on the garment.
- **Minimum:** converts the transparency information to an underbase and then process's the underbase to remove areas of the underbase where the colors in the main image are black (because you do not need to print white under black).
  - this setting is equivalent to Normal underbase in the underbase wizard
  - uses the least amount of ink for the underbase
- **Medium:** converts the transparency information to an underbase and then process's the underbase to remove areas of the underbase where the colors in the main image are black (because you do not need to print white under black).
  - this setting is equivalent to Heavy underbase in the underbase wizard)
  - maintains colors in dark shadows better
- **Strong:** Will create an underbase from the transparency without modification.

Note: Medium is recommended setting, minimum will use the least amount of white ink.

Gamma adjustment: This option applies a *Gamma* adjustment to the white underbase. *Gamma* is another term for the levels adjustment found in programs like PhotoShop. It lightens or darkens the midtones the most and then has a small proportional effect on highlights and shadows, 100% pure color and 0% pure color are not affected at all. This is very useful for controlling the amount of white used when blending in a graphic with the shirt color and as an additional trapping tool. A low value will put down less white ink where the image is partially transparent, while a high value will put down more black ink in the same area.



This shows the *Gamma* effect on a white underbase gradient with values of 10, 128 and 245, so higher values will use more white under partial transparent areas (to much can create a white halo effect) smaller values will use less white and act as a choke on the white underbase in these areas. Too little and all that will show through though is the shirt color. Default is 128. *Gamma* will be covered in further examples throughout this manual.

Choke the Underbase: This setting has 5 options, used when the underbase is created to choke (trap) or shrink the white underbase so that the white ink area is smaller than the color print area and stops any white showing due to registration or bleed problems.

- **None:** Applies no choke to the Underbase
- **Minimum:** Applies a choke of equivalent to 2 pixels at 720dpi
- **Medium:** Applies a choke of equivalent to 3 pixels at 720dpi
- **Maximum:** Applies a choke of equivalent to 5 pixels at 720dpi
- **Extreme:** Applies a choke of equivalent to 10 pixels at 720dpi

NOTE: The accuracy of the choke depends upon the resolution of the image, but typically you want 300/360dpi images to get a good accurate choke. If you choke too much, then it can cause other problems (most noticeable on lighter color shirts) and create what looks like a stroke color around the object. Best defaults are Minimum or Medium for Light color shirts and Medium or Maximum for Black shirts. You should only use the Choke feature if you experience registration issues between the white and color pass.

Highlight White: This selection creates a highlight white to be printed as part of the color pass.

- **None:** doesn't create a highlight white
- **Weak:** creates a weak highlight, using the least amount of ink and only in white areas.
- **Medium:** uses more white ink for the highlight in areas of pure white
    - Similar to the highlight white from the Normal underbase in the underbase wizard

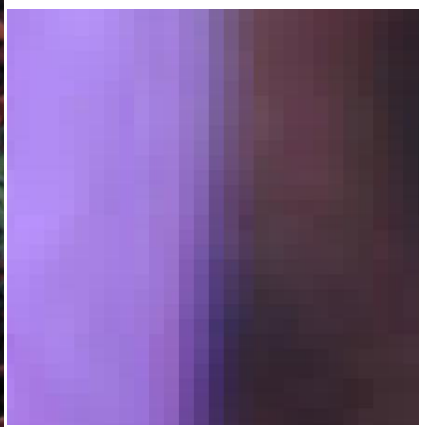
- **Strong:** Uses 100% white ink in areas of pure white
    - Similar to the highlight white from the Heavy underbase in the Underbase Wizard

NOTE: Using too much white, especially in the color pass can cause your colors to become washed out. This happens when the White ink and color inks mix. Its best if you can avoid using a highlight white for DTG and get a white underbase instead. If you do use this, use it sparingly to avoid color shifts, unless you are print just white objects.

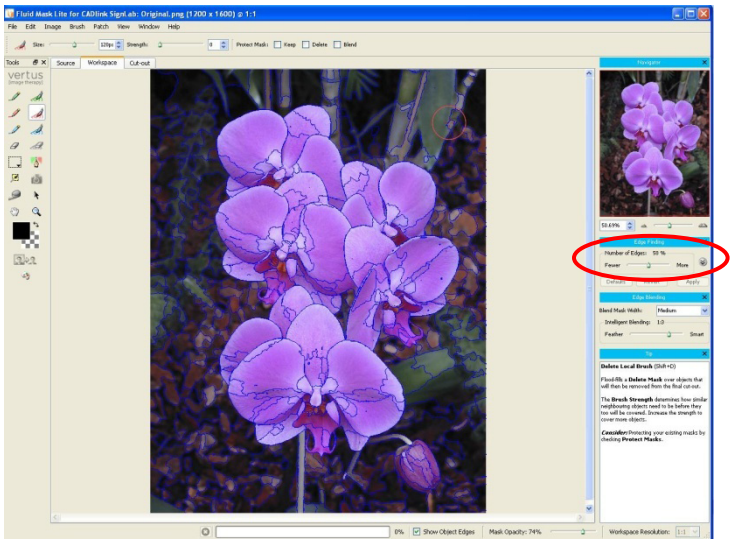
When you click OK, FastARTIST will create a grouped object with underbase, color and highlight ready for printing.

Blending the Edges

When working with scanned and digital photograph images, the edges between what you want to keep and what you want to remove is normally a blend between the two color pixels over several different shades of pixels making up a blend or gradient.

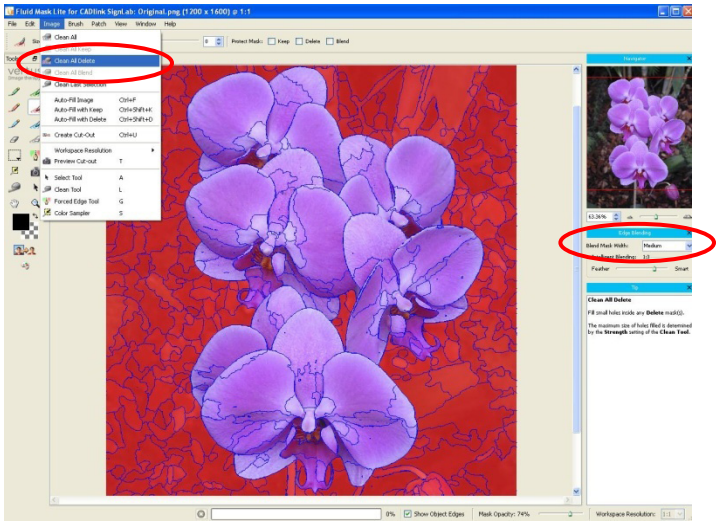


For example, if you want to remove the flowers from the background, by looking closely at the area between the flower and background, you can see an area of 3-5 pixels that blend the flower color to the background colors. When this image is printed onto a colored garment, it should blend from the edges of flower into the color of the shirt, producing the cleanest transition and giving the image the appearance of being part of the shirt. *Fluid Mask* does this automatically for you.



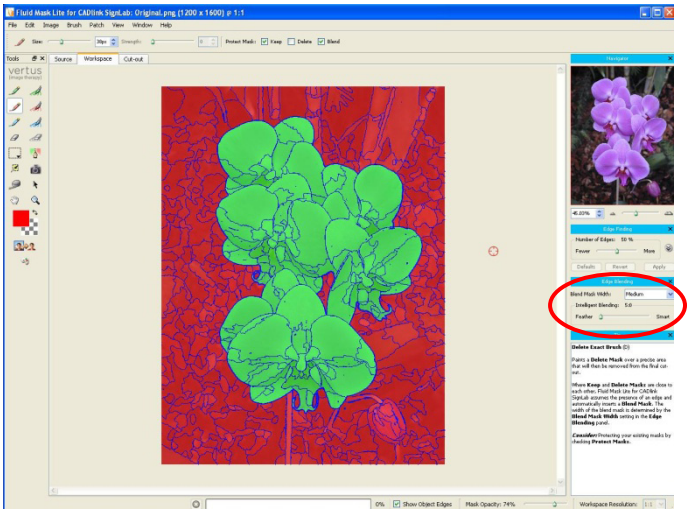
When opening an image such as this, its quite complex and finding the right number of edges / regions is important to help you select just the contents you want. You can control the number of edges / regions by changing the Number of Edges slider on the right hand side of the *Fluid Mask* Window, to more or fewer to help with you selection.

After selecting all areas you want to delete, for more complex jobs, select ***Clean All Delete***, from the *Image Pull-down Menu*. This will mark any small areas you may have missed for deletion. If there is a small region in the left in the middle of the deleted area, it automatically gets cleaned up and marked for deletion.



When you select ***Auto fill with Keep***, *Fluid Mask* will create a blend mask between the red and green areas (which will be displayed as blue) as if you had used the blend brush.

It does this automatically whenever you select ***Auto-fill with Keep***. The width of this blend is controlled by the *Blend Mask* width on the right hand side of the window.



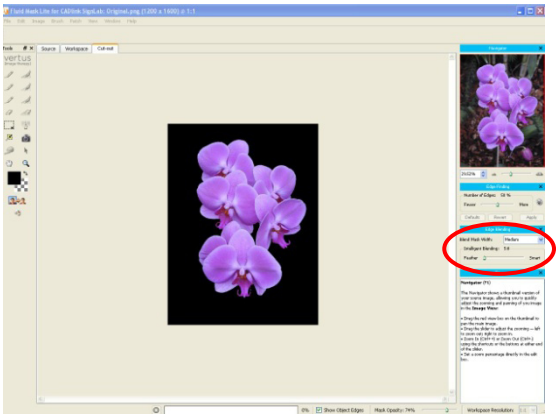
The following three options will let you control the blend between the keep areas and the delete areas.

- **None:** No blend mask will be applied.
- **Thin:** A thin blend mask will always be applied.
- **Medium:** A thin blend mask will be applied to sharp edges. A medium-thickness blend mask will be applied to edges that are less sharp.
- **Thick:** *Fluid Mask* will apply a blend mask with a thickness appropriate to the sharpness of the edge.

Note: You need to make your selection before using the ***Auto-fill with Keep*** command.

Intelligent Blending will control how the pixels in the blend area are processed for the final cutout.

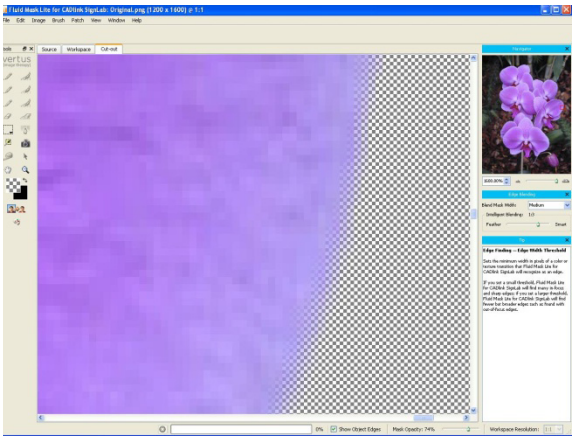
Fluid Mask has two methods for blending the edges along the cut-out border, named ***Feather*** and ***Smart***. The Feather method is a simple even transition across the edge. The Smart method uses the characteristics of color and texture variations around and across an edge to determine how an edge should be blended. Sharp edges remain sharp. Blurred edges retain the softness of the original, with the background colors removed.

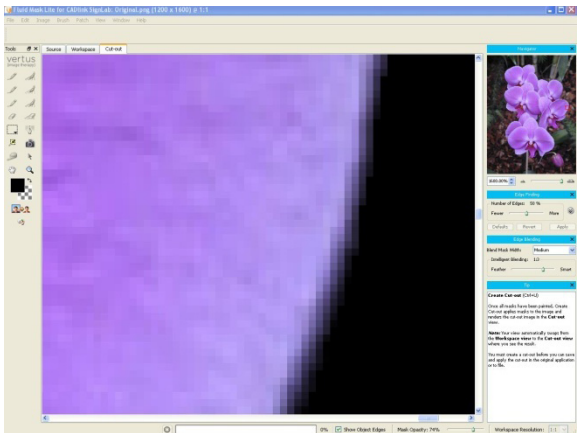


Smart Blending typically produces higher quality results. However, if an edge has low contrast or a lot of noise, the edge produced may be uneven. In such circumstances, feather blending should be used.

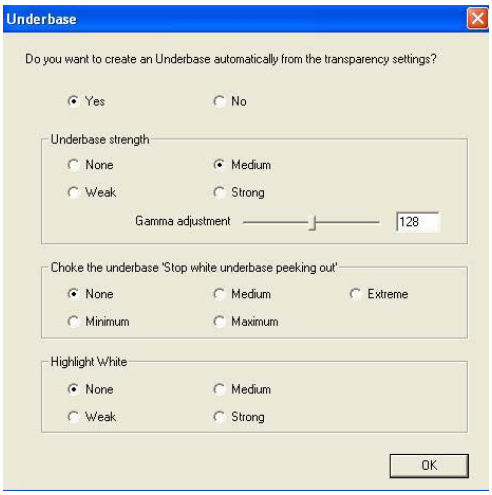
If you set the *Intelligent Blending* slider all the way to one side or the other, *Fluid Mask* will always use the chosen method for blending. If you choose one of the intermediate settings, *Fluid Mask* will choose which method to use based on edge characteristics. If the slider is closer to one side, the choice will be weighted toward that method. *Fluid Mask* makes the decision for each edge along the border of your cut-out.

This example preview below shows you the Edge of the flowers, on the left with a transparent background and on the right as it will look on a black shirt.





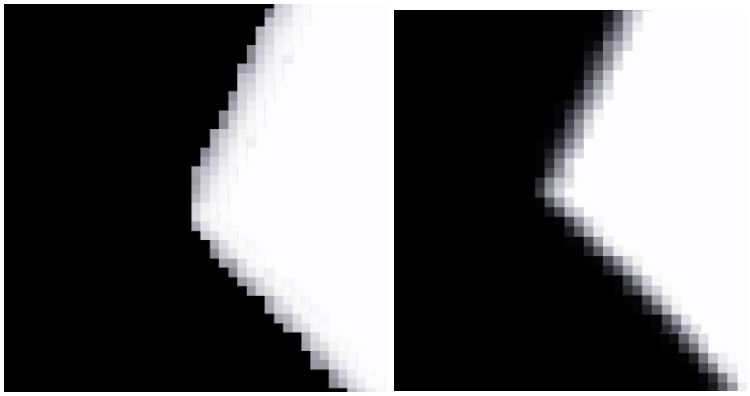
You can change the *Intelligent Blending* mode and click ***Cut Out*** again to see the effect on the edges.



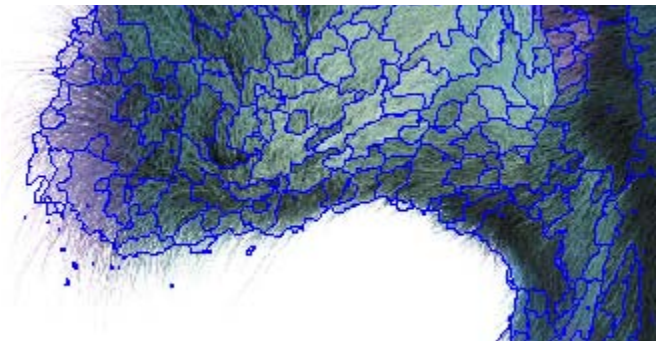
Once you feel you have the edge blend as you want, click ***Save and Apply*** under the *File Pull-down Menu*.

The *Gamma* control in create underbase dialog will affect the amount of white ink used in those edges.

This is a preview of the underbase (using black for the white ink) using a *Gamma* value of 10 (left view) and a *Gamma* value of 128 (right view). A *Gamma* value of 10 will choke back the white blend and allow more shirt color to show through. If you are having trouble with white edges to you image, reduce the *Gamma* value, the right value really depends how much white ink you put down as part of your underbase and this depends on print modes, model of printer and white ink and pre treatment.



Masking Hair

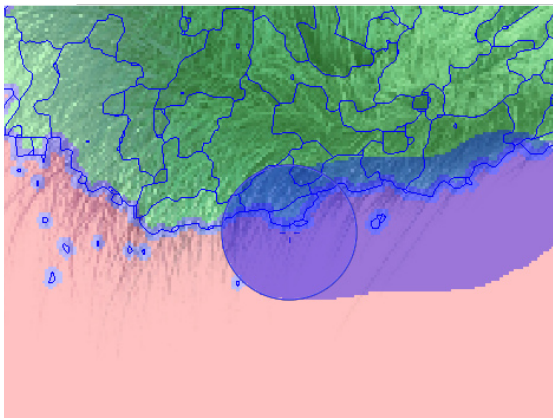


Some art files may have harder edges to mask, such as hair or fuzzy edges. This lesson will be similar to the previous, but will also cover using the ***Blend Exact Brush*** to pull out and blend the background portion that is still showing through such things as hair or partially transparent areas.

As shown for this example, a basic routine has been run and cutout on this monster character and set to view on a blue background (shirt color).

NOTE: In order to keep the hairy area, when starting the routine, use the exact delete brush to frame out the unsure areas before using the Delete Local Brush. The Delete Local Brush may break into the areas you may want to keep later.

If you look closely, you will notice the hard edge of the white around the outside that has been left there. Fluid Mask needs to be told what to do with this soft "hairy" edge.

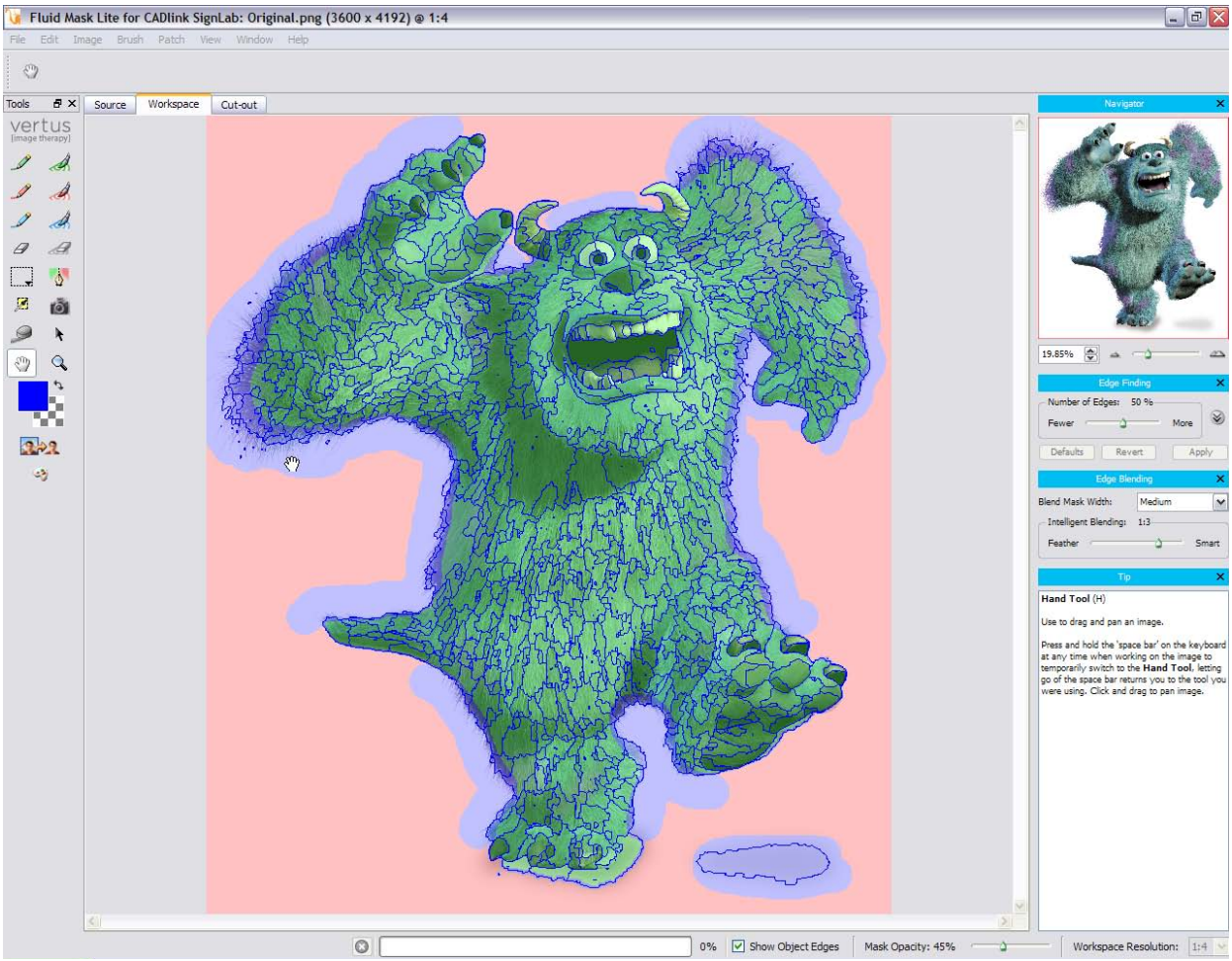


1. Go back to the workspace tab to continue masking.
2. Select the ***Blend Exact Brush*** from the Toolbar
3. Adjust the brush size (if needed) and brush over the hairs that have the white background peaking through.

   This will delete the white pixels and keep the pixels from the hair.

NOTE: If you don't know exactly where the white pixels are, select the *Cut-out Tab* for reference and then go back to the *Workspace Tab* to complete the editing. You can also use the Preview Cut-out Tool in the Toolbox. Hold down the left mouse button and drag a box of the area you would like to preview. This will greatly minimize the time it takes to Cut-out over and over again. To clear, hit the Spacebar or select a tool from the Toolbox.

4. When you are finished, select the cut-out from your tools to see the complete result.



Smudge Touch-Up

You may often see that your design has an unknown area or incorrect deletion or maybe an edge doesn't look correct.

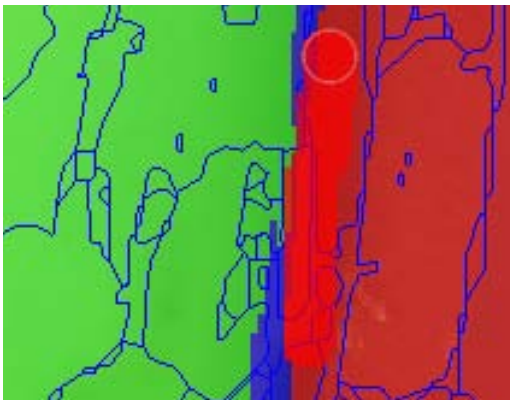
This example is a cutout of a person. The arm, however has an odd area that needs touching up.

1. First, select the ***Exact Delete Brush***.

2. Next, under Edge Blending, pick a setting that will correspond to the surrounding area. In this example, a Blend Mask of Thin will be used.

3. Next, manually delete the area that is unwanted until the desired effect is reached.

   You can do the same thing to add an area that has been deleted by selecting the ***Exact Keep Brush***.



NOTE: If you need to adjust the blend, just manually add one with the Exact Blend Tool.

Prepare to Vectorize Wizard

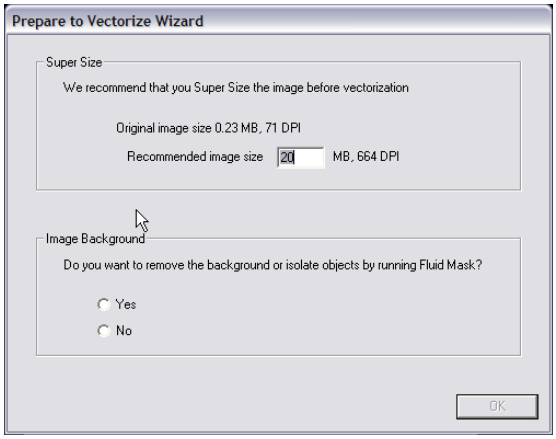
FastARTIST provides two methods of vectorizing an image into line art. The classic vectorization method provided leading-edge tools that were suitable for previous version users. The new method uses the Prepare to Vectorize Wizard, which introduces new tools for improving the image quality, knocking out the image background, and posterizing the image colors prior to tracing. This is very helpful when you have a logo or vector looking Bitmap image that you want to be sharp and clean. To learn about the classic Vectorization method, refer to ***Chapter 7 - Working With Bitmap Images***.

Getting Started

1. Import the Image you want to vectorize by selecting ***Import*** from the *File Pull-down Menu*. For this example we are using a

2. From the ***Bitmap*** *Pull-down Menu* select ***Prepare to Vectorize Wizard***.

   A window will open up, giving you the option to Super Size your image before Vectorization and will also ask if you want to remove the background or isolate objects by running Fluid Mask. For this example, a snake image will be used which has already been run through Fluid Mask so No will be selected here.

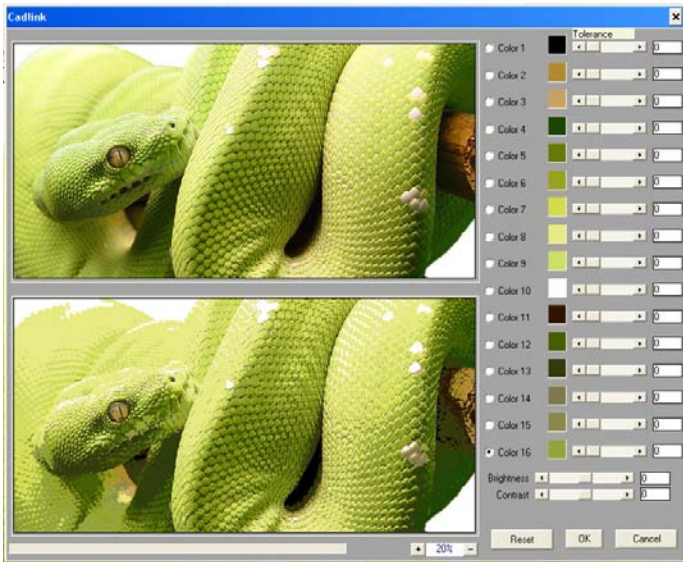

Prepare to Vectorize Wizard
Super Size
We recommend that you Super Size the image before vectorization
Original image size 0.23 MB, 71 DPI
Recommended image size
20
MB, 664 DPI
Image Background
Do you want to remove the background or isolate objects by running Fluid Mask?
Yes
No
OK

NOTE: the Super Size option will only appear if you have a low resolution image.

3. Select *Yes* or *No* for *Fluid Mask* and click *OK*. If selecting *Yes*, follow the instructions on using *Fluid Mask* earlier in this chapter then return here to continue on with *Step 4*.

Adjust Settings

The ***Posterize*** dialog window will open. This window allows you to select the colors, one-by-one, that you want to use in your image. You can adjust the tolerance of each color to determine how much of the area you want to cover with that color selected.



1. Click the circle selection next to the Color 1 - Color 16.

2. Next, either select the color from the image by clicking it from the original preview (top) or click on the color box to assign a particular color to that color number.

   The ***Preview Window*** at the bottom will preview what the image will look like based on your selections.

NOTE: If you do not like a selection, you can re-sample that color or shade as many times as needed until the preview image looks correct. Selecting Reset, will allow you to start over.

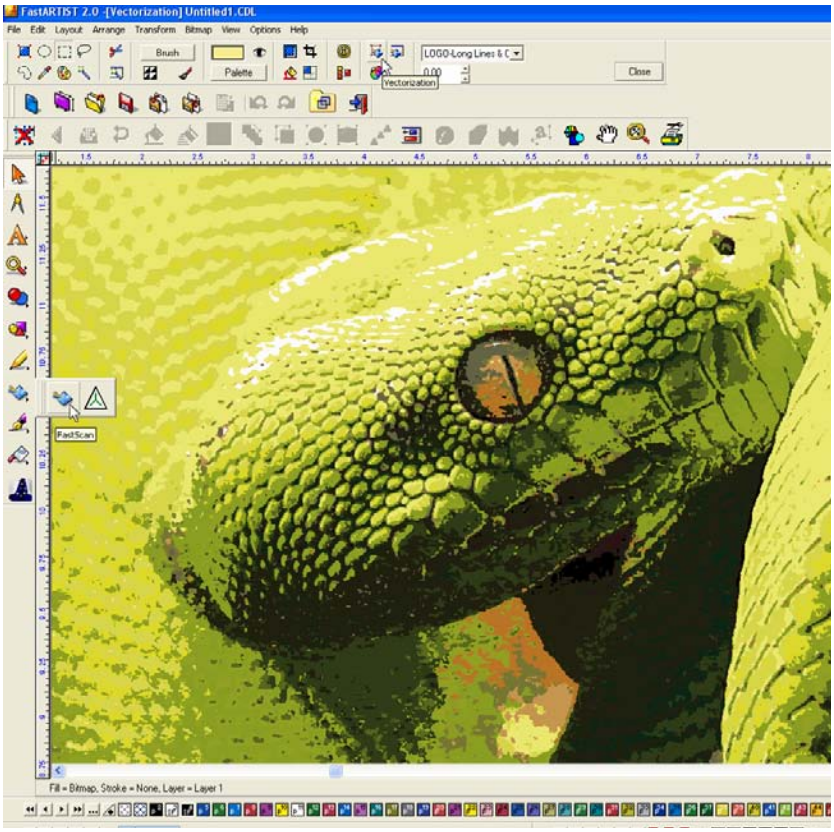
3. Make any adjustments necessary using the ***Brightness*** and ***Contrast*** controls.

4. Select *OK* when complete.

Next, double click your image and select the Vectorization tool at the top located in the SmartBar.

You now have a vectorized image.

You can also select the Scan Tools icon from the Toolbox, then select the Vectorization tool at the top.



For previous information on the classic vectorization methods, refer to ***Chapter 7 - Working with Bitmap Images***.

Chapter 11

Photoshop Plug-ins and Tools

FastARTIST 2.0 includes two new plug-ins for use with PhotoShop® to help streamline your shirt underbase preparation. This chapter will cover how to apply these plug-ins to your designs, what other PhotoShop tools are also available for underbase preparation, and how to perform color management to ensure consistent print quality.

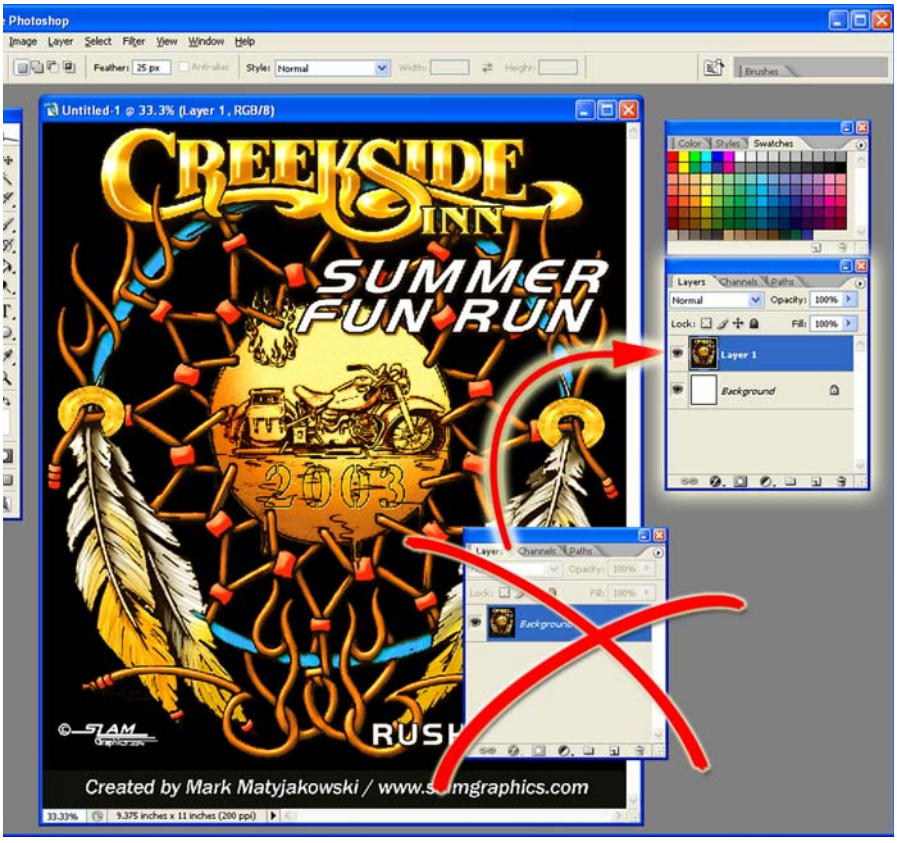
Introduction

When printing onto either black or color shirts, it is often the case that a white underbase need be applied in order to prevent the shirt color from showing through and interfering with the printed design. This chapter will explain simplified underbase preparations that are possible using the Knockout PhotoShop plug-ins.

- **KnockMeBlackOut** - This plug-in is optimized for creating an underbase for either black or near-black colors. If you have an image that already has a black background, and you want to print onto a black shirt, then this plug-in provides a one-hit sequence for preparing the image.
- **KnockMeColorOut** - This plug-in can be used to remove any color (including white). For example, if printing to a red shirt with an image that has a red background, this plug-in can remove a specific percentage of that red from the image as a one-hit preparation. Though this filter can be also used for removing black, it is recommended that you use the KnockMeBlackOut filter instead.

Image Preparation

Before preparing an underbase for your image, ensure that the image is on its own layer, and NOT on the default Background layer.
To do this, select from the Layers Pull-down Menu, Duplicate Layer. A second layer will be visible in the layers palette named “Background Copy”. You now have a duplicate of the default background layer that you name and apply actions to, separately.



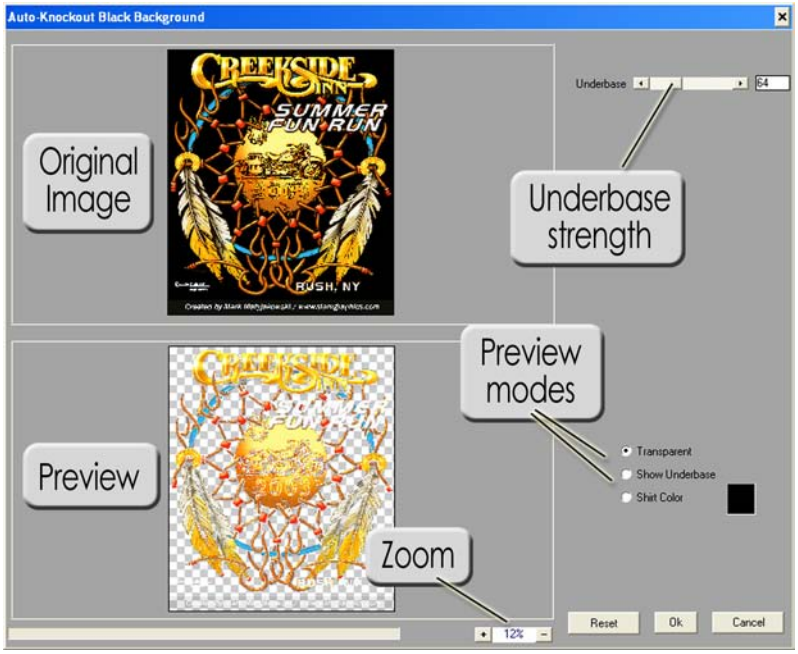
You will need to be familiar with editing layers in your design, as it is not possible to setup an underbase on the default ***Background*** layer.

KnockMeBlackOut

This plug-in is optimized for creating an underbase for either black or near-black colors. If you have an image that already has a black background, and you want to print onto a black shirt, then this plug-in provides a one-hit sequence for preparing the image.

Using KnockMeBlackOut

The **KnockMeBlackOut** Dialog allows you to remove black and gray backgrounds from your images and preview the result. To open up the **KnockMeBlackOut** Dialog, select it from the FastARTIST flyout of the Filter Pull-down Menu.



The window will display the original image above a preview of how it will appear with the black background knocked out. By adjusting the Underbase strength, shades of gray can be included with the knocked out portions.

Generally, this plug-in is optimized for creating an underbase for either black or near-black colors. If you have an image that already has a black background, and you want to print onto a black shirt, then this plug-in effectively provides a one-hit sequence for preparing the image.

- **Preview** – The original image is shown above the filtered image. At the bottom-right is a zoom control for inspecting the filter results. When the zoomed image does not fit within the available space, click and drag to reposition the preview.
- **Transparent** – This is a preview mode that shows how the image will appear once it is saved back to PhotoShop. This is the best view for inspecting the color that will be printed.
- **Show Underbase** – This preview mode shows the white underbase that will be created. Note that the preview is inverted, such that black areas represents the white underbase, and the white areas will not be applied with underbase.
- **Shirt Color** – This preview mode combines the shirt color, underbase and color components to show the preview as it would appear on the finished shirt. The color picker can be used to choose the specific hue that represents the shirt color.

- **Underbase** – Use this field to adjust the underbase strength (0..255) that will be applied to the shirt. The default underbase setting is 64 (about 25% of maximum). Increasing this value will cause more Underbase (and a corresponding amount of color) to be laid down when printing.
- **Reset** – Set all the dialog controls to their recommended defaults.

Changing the underbase setting does not change areas that will have 100% white ink in the underbase, nor areas that require no white ink in the underbase. Instead, the underbase setting will change the amount of white ink used to blend the black color (of the shirt) into the color of the graphics. As more white ink is used (i.e., in the shadow regions of the image), more ink in the color pass will be required in order to maintain the shadow.

The end result is that shadow regions will be lighter and more visible.

In the **Show Underbase** preview mode, black portions show where the underbase will be applied.

In the **Shirt Color** preview mode, the underbase and the finished design are previewed on the shirt (shown here as red).

The Underbase slider controls how much white underbase to put down. Naturally, increasing this value will lay down more underbase (i.e., spot white). However, as a consequence of laying down more underbase, a corresponding increase in colors will occur to balance this.

This is a clipped area of the original image. In this example, we'll use this image with the KnockMeBlackOut Plug-in.

Here are all three preview modes with the default Underbase of 64. From left to right, the preview modes are listed below.

Transparent Show Underbase Shirt Color

Here are the same preview modes with the Underbase set at it's maximum level of 255.

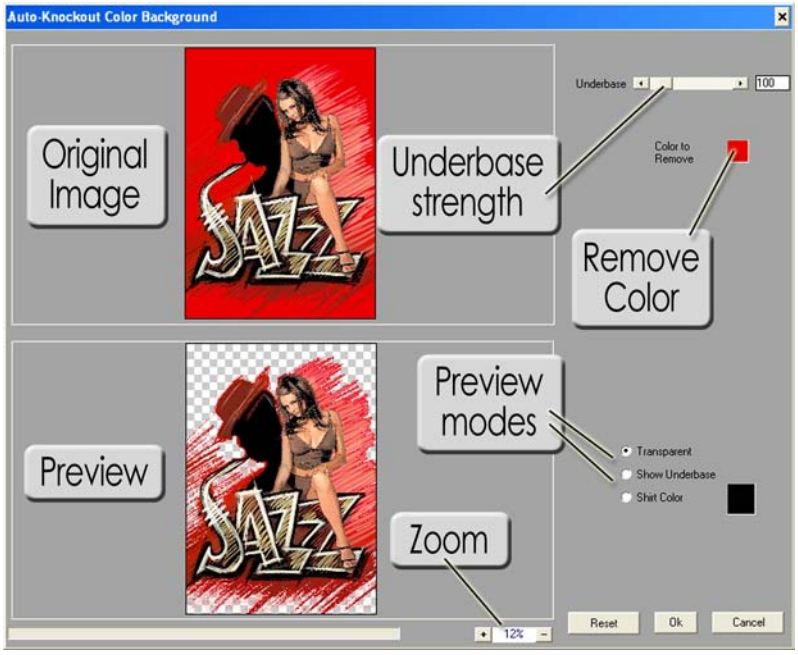
Transparent Show Underbase Shirt Color

KnockMeColorOut

The KnockMeColorOut plug-in is similar to the KnockMeBlackOut dialog, except that a specific hue can now be selected and removed from the image.

Using KnockMeColorOut to Knockout Color

The KnockMeColorOut Dialog allows you to remove any color background from your images and preview the result. To open up the KnockMeColorOut Dialog, select it from the FastARTIST flyout of the Filter Pull-down Menu.



1. Click on the original (top) image.

2. Next, click the "Color to Remove" color picker and sample the color to remove.

Again, the rest of the tools and options in the KnockMeColorOut Dialog (Preview modes-transparent, shirt color, Show Underbase, the Preview Window, Underbase Strength etc.) will work much like the ones in the KnockMeBlackOut Dialog.

The Underbase setting can vary from 0 to 1000, with a default of 100 (i.e., 10%). In the following two images, Underbase settings of 100 and 650 have been applied. At the higher Underbase setting, less ink will be applied, allowing more of the shirt color (e.g., a red shirt) to show through and blend with the image.

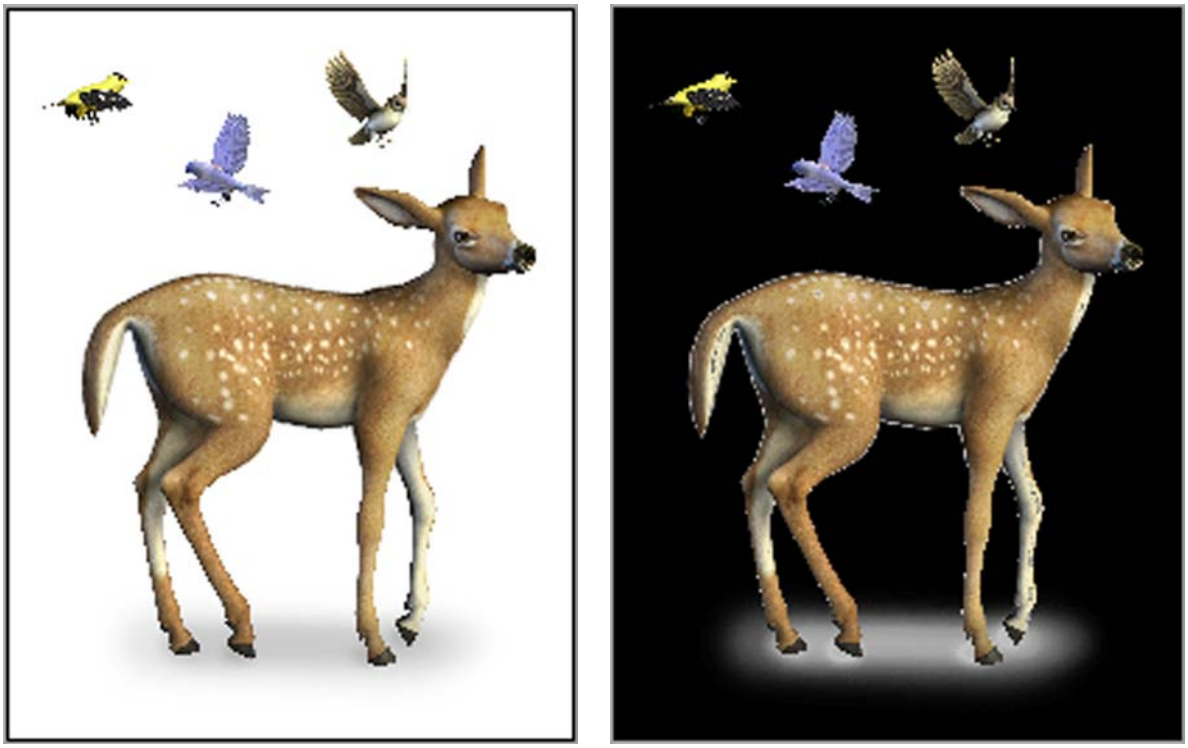
With an **Underbase** setting of 100, only about 10% of the selected hue is "knocked out," which provides a greater background contrast with the shirt color. This would be appropriate when printing onto a black shirt, so as to retain more of the red image.

With an **Underbase** setting of 650 (65%), this would be appropriate for printing to a red shirt. Less ink would be used to print the image color, thereby allowing the image to blend more naturally into the shirt color.

If the shirt color were black, then the Underbase setting of 100 would be suitable because more of the red image background would be retained. However, if the shirt color were red, then an Underbase setting of 650 would allow a more natural blend between image background and the shirt color.

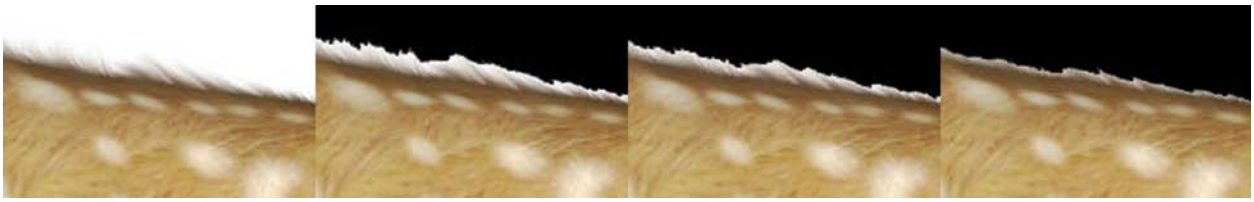
Apply Soft Edges

The KnockMeColorOut plug-in can also be used to help with blending soft edges into the shirt color. For example, Fig. 11 shows the image of a doe that needs to be applied to a black shirt. However, if we merely perform a blanket knockout of the white background, then the result is a white halo effect that (usually) detracts from the image quality.



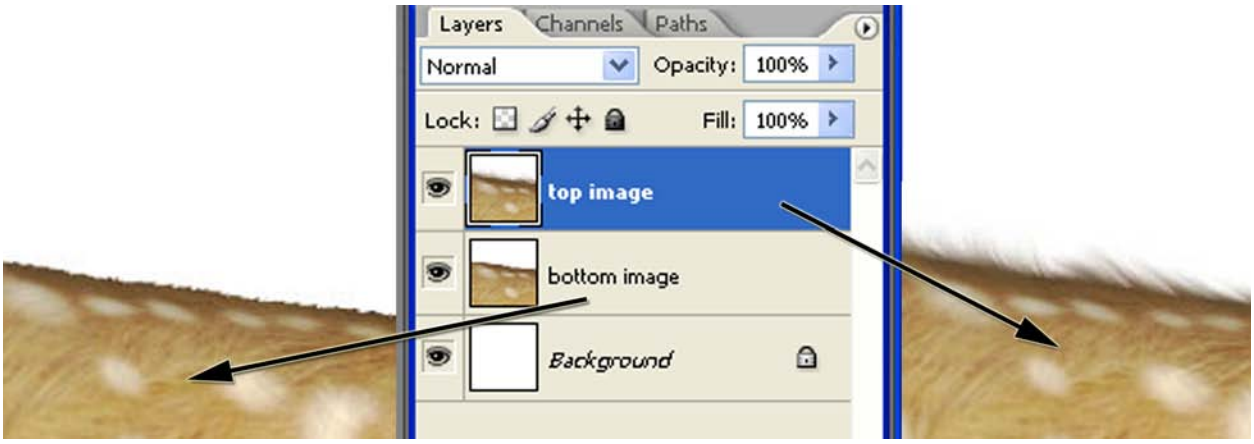
For the image on the left, we want to knock out the white background for application to a black shirt. However, the preview on the right shows that off-white pixels will create a halo effect around the doe.

If we inspect a small region of the doe's back, then we can see why this happens. The fur of the doe is difficult to select and remove correctly. Though increasing the tolerance of the Magic Wand tool can capture more of the off-white pixels, removing bits of the off-white fur will produce a hard edge that detracts from a natural image. What is really needed here is to retain the fur and blend it into the black of the shirt.



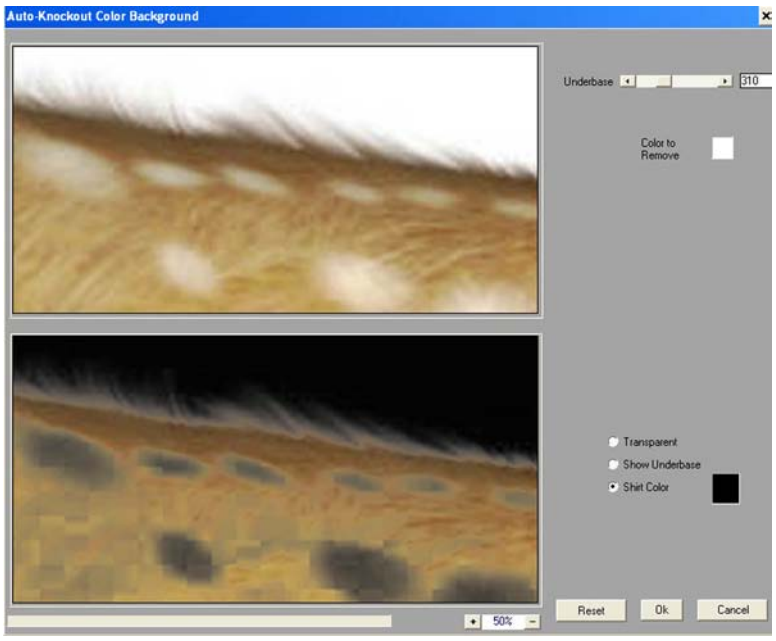
By increasing the **Overprint** setting, more of the white halo is removed. However, fine detail is lost (i.e., the doe hair).

The solution is to create a duplicate layer of the image, then use the Magic Wand tool to clean the outer contour of the underlying layer image.



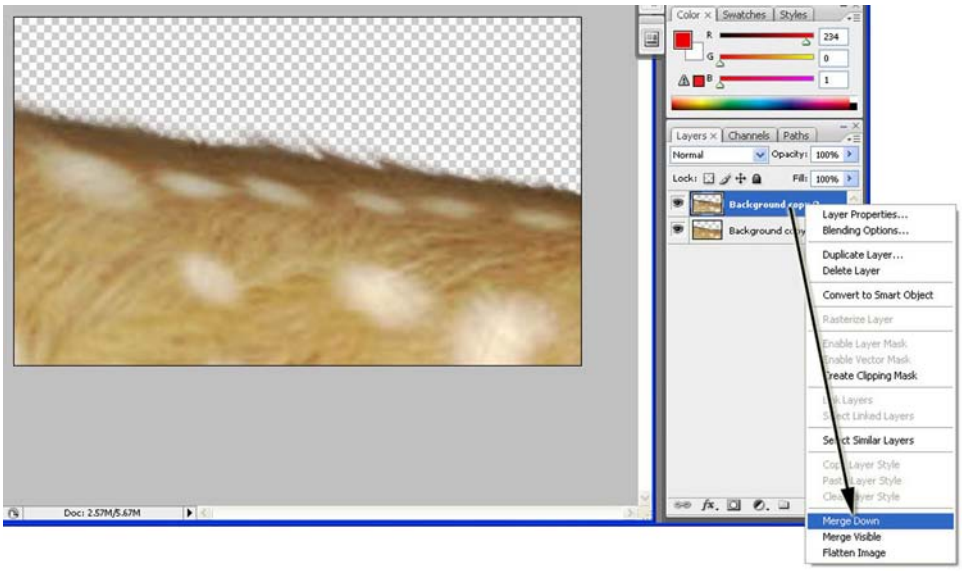
On the left, the **Magic Wand** tool was used to carefully remove the off-white portions along the fur, including the hairs of the fur. On the right, we have a second layer copy of the doe with fur intact.

The KnockMeColorOut tool can then be applied to the top-most image to remove white and off-white. Adjust the Underbase setting to achieve the desired blend of fur with the black shirt background. This will remove the white spots from the top-most image, but the white spots from the underlying image will now show through (thereby preserving the image quality).



The **KnockMeColorOut** can now be applied to the top image. This removes off-white from along the hairline, though removes white from the animal pelt as well.

Once the top image is ready, use the Layers Pull-down Menu > Merge Layer command to combine it with the underlying layer image. The image is now ready for application to a black shirt. Using these techniques, you can blend even complex images like fur and hair into your shirt, thereby obtaining the highest quality t-shirt printing results.



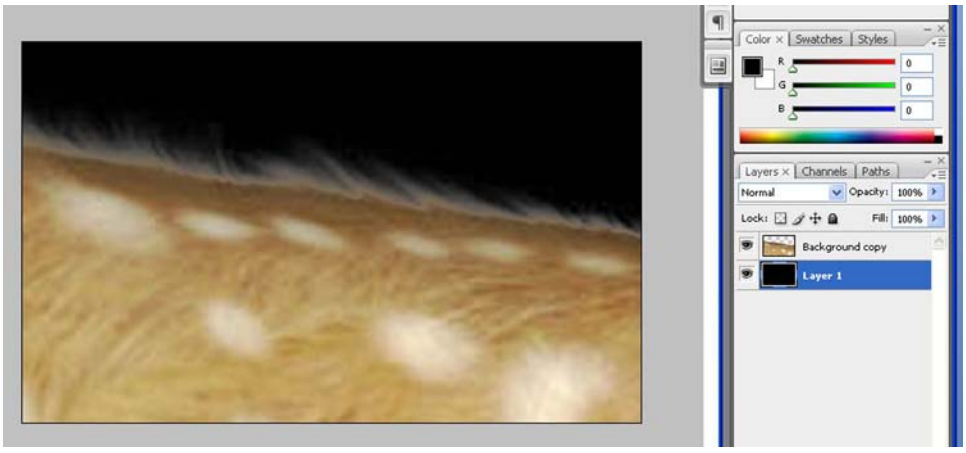
Once white has been removed from the top image, right-click the layer and choose **Merge Down**. This will combine the top image with the underlying image (which still has the white spots on its coat).

Other Photoshop Tips

Viewing the Shirt Color in Photoshop

If you need to simulate the shirt color in PhotoShop, create a new layer that is filled with the shirt color, and then drag the layer beneath the image layer.

1. In the **Layers** palette, click the **Create a New Layer** button.
2. The new layer will be selected.
3. From the **Tools** palette, click the **Paint Bucket Tool**.
4. From either the **Color** or **Swatches** palettes, set the fill color equal to the shirt color (black).
5. Click on the image to perform the fill.
6. In the **Layers** palette, drag the filled layer to beneath the image layer.



Place a black filled layer beneath the image to simulate how it will appear when printed to a color shirt (black in this example).

Note: Use this filled layer for on-screen preview only. Delete the filled layer before printing the job.

Using the History Brush

In our previous KnockMeColorOut example (i.e., a doe on a white background), we were required to prepare the image on two layers because the KnockMeColorOut plug-in would otherwise cause white portions within the doe fur to be lost. However, a simpler method can be to use the **History** tool to undo the portions that were knocked out of the doe fur.

1. Start with the original image that has been pasted on its own layer (e.g., the doe in our previous examples).

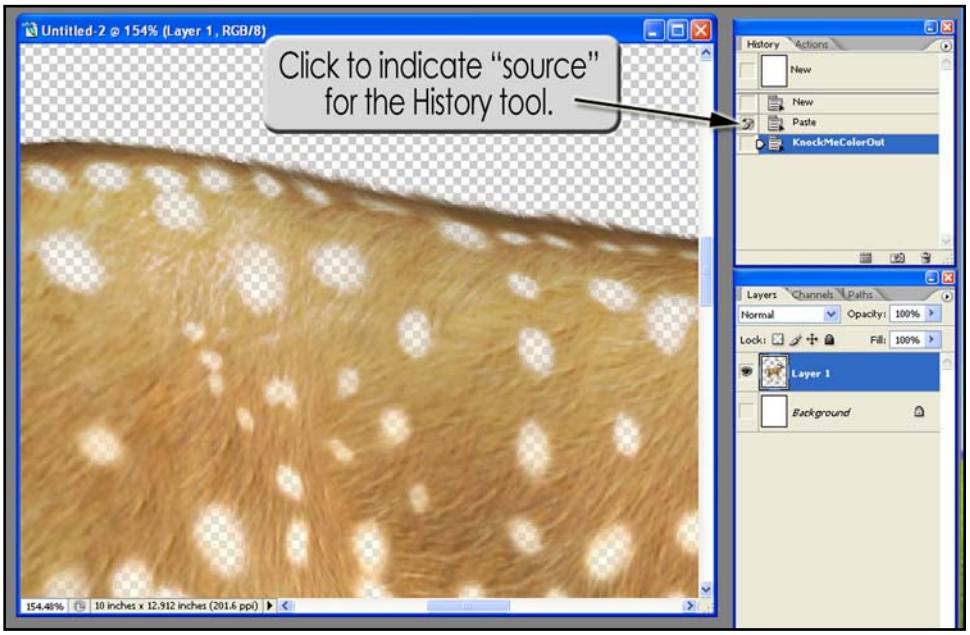
2. Apply the **KnockMeColorOut** plug-in to the image, and increase the **Underbase** setting to remove off-white portions as well.

3. From the **Tools** palette, click the **History** tool.

4. The **History** palette will open, and discrete steps of the editing history for this image will be listed.

5. In the **History** palette, tick the checkbox that is at the far-left of the "Pasted" layer. This indicates to the **History** tool that this step in the editing history will be the source.

6. At this point, the **History** "brush" is like a regular brush. Adjust the size of the brush and then click on the image where portions from step (2) need to be reversed.



Click to indicate that the original pasted layer will be the "source" for the **History** tool.

Anti-Aliasing for a White Underbase

When printing with a white underbase, take care to avoid design elements that introduce visible aliasing (i.e., staircasing). For example, adding text objects to the design in PhotoShop can create aliasing because the text needs to be rasterized when output. If at all possible, do any text work within FastARTIST and then layout the text with the images from PhotoShop. For cases where you **must** layout your text within PhotoShop, use the advice as explained here:

- When adding text in PhotoShop, there are five anti-aliasing options (older PhotoShop versions may have a checkbox for toggling the anti-aliasing ON/OFF).
- When enabled, anti-aliasing will blur the edges of the text into the background. By default, anti-aliasing in ON.
- However, with anti-aliasing enabled, this introduces the same white halo issue that occurred when removing the white background from the doe image.
- Instead of attempting to blend the text into the background, it is easier to simply turn anti-aliasing = None or OFF.
- Though turning off anti-aliasing will cause noticeable staircasing, there won't be a white halo.
- If the text requires higher quality, then use Image menu >> Image Size to increase the resolution.

NOTE 1: Aliasing is only an issue when printing with an underbase because it will produce a halo effect. If printing to a white shirt, then there will not be an issue.

NOTE 2: Avoid saving the finished file in JPEG format, as the compression method used for JPEG can introduce aliasing issues.

NOTE 3: When copy and pasting objects from (say) Illustrator or CorelDraw into PhotoShop, these objects will be anti-aliased by default.

Directly Adjusting the Underbase

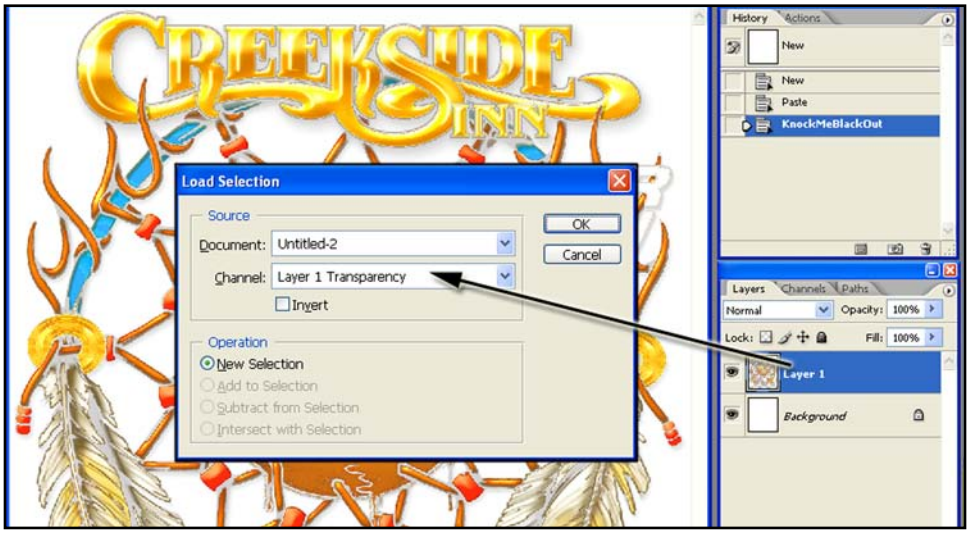
After having applied either the KnockMeColorOut or KnockMeBlackOut plug-ins, it may be desirable to selectively edit the underbase. This can be done by converting the underbase information into an editable channel, to which the standard PhotoShop editing tools can be applied, including the Image menu >> Adjustment flyout tools.

Suppose that we have an image on its own layer, and we have applied KnockMeBlackOutd to remove the image background.

1. From the **Select** menu, choose **Load Selection**.

2. The **Load Selection** dialog will open.

3. Click **OK** to accept the dialog settings.



Creating a selection from the currently defined underbase, which was defined when using the **KnockMeBlackOut** tool.

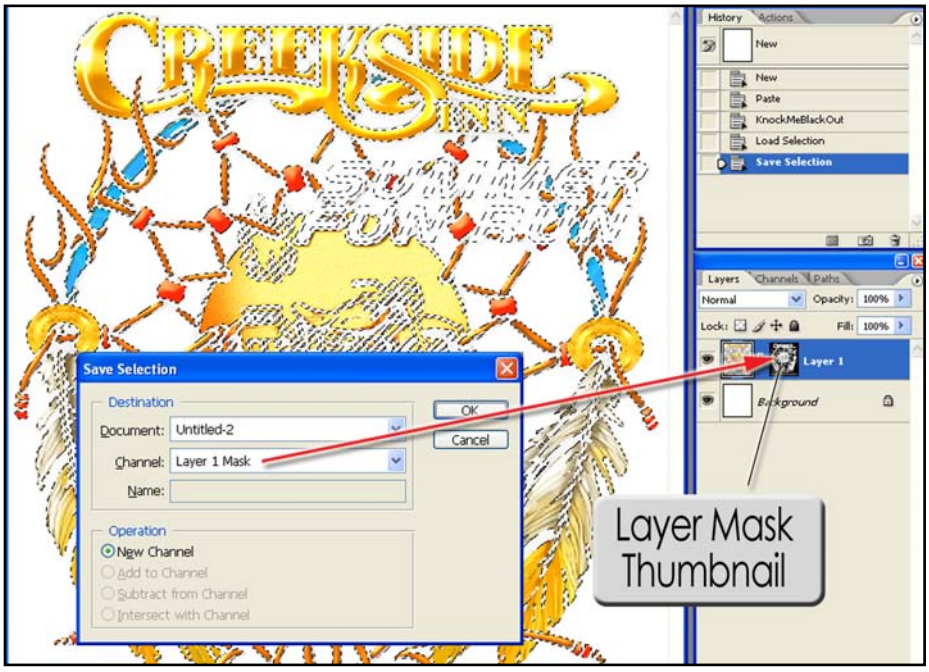
4. The previously created underbase will now be the active selection.

5. From the **Select** menu, choose **Save Selection**.

6. From the **Channel** drop-list, choose **Layer 1 Mask** (i.e., the name of image layer).

7. Click **OK** to continue.

8. In the **Layers** palette, there will be a **Layer Mask Thumbnail**



The complex selection has now been defined as a distinct mask, which will be editable (i.e., the underbase can be edited using the PhotoShop tools).

9. Clear the current selection (i.e., **Select** menu >> **Deselect**).

10. Select ***Channels*** from the ***Windows*** *Pull-down Menu.*

    In addition to the RGB channels, there will be a **Layer 1 Mask** channel. At this point, any of the PhotoShop tools can be used to modify the underbase (e.g., brush tools, **Image** menu adjustments, etc.).

11. For example, in the **Channels** palette, click the **Layer 1 Mask**.

12. Then from the **Image** menu, choose **Adjustments** >> **Levels**.

13. Use the **Levels** dialog to adjust the midtones of the underbase, so as to modify how much of the shirt color will show through.

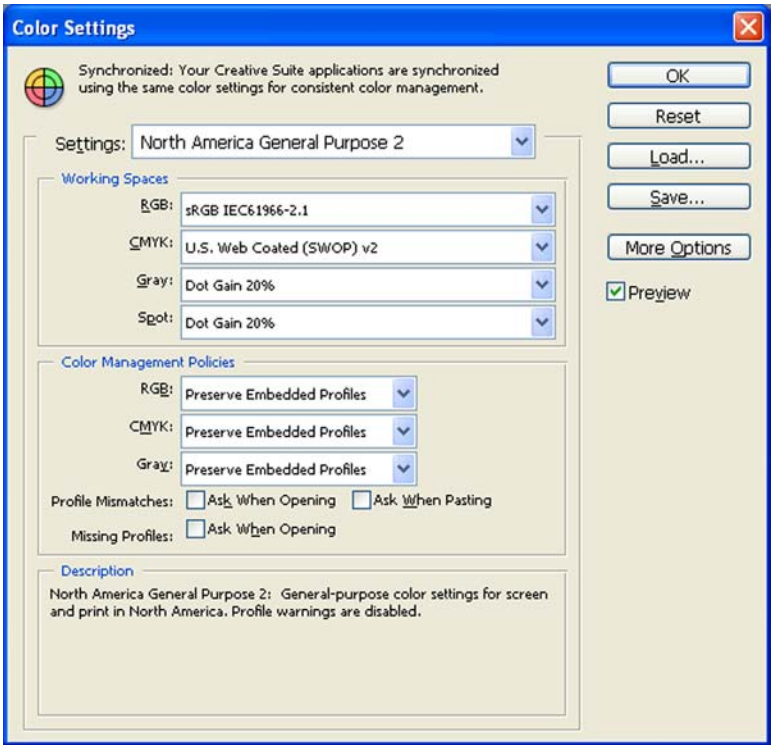
14. Once the adjustments are complete, the channel can be removed in the **Layers** palette (i.e., in the **Layers** palette, right-click the **Layer Mask Thumbnail** and choose **Apply Layer Mask**).

Color Management

To configure the color management settings in PhotoShop, go the **Edit** Pull-down Menu and select **Color Settings**.

Since PhotoShop is a general purpose graphics design application that can be applied to a number of uses, use the default color management settings as a guideline, and adjust these settings when you have specific output requirements.

The Color Setting dialog is used to set the color management settings in PhotoShop. In Adobe Creative


Color Settings
Synchronized: Your Creative Suite applications are synchronized using the same color settings for consistent color management.
OK
Reset
Load...
Save...
More Options
Preview
Settings: North America General Purpose 2
Working Spaces
RGB: sRGB IEC61966-2.1
CMYK: U.S. Web Coated (SWOP) v2
Gray: Dot Gain 20%
Spot: Dot Gain 20%
Color Management Policies
RGB: Preserve Embedded Profiles
CMYK: Preserve Embedded Profiles
Gray: Preserve Embedded Profiles
Profile Mismatches: Ask When Opening Ask When Pasting
Missing Profiles: Ask When Opening
Description
North America General Purpose 2: General-purpose color settings for screen and print in North America. Profile warnings are disabled.

Suite products, note that Adobe Bridge is used to set the color management that is used across the suite.

When you use several design applications for creating, modifying and outputing your jobs, it is important that you have consistent RGB color management settings. Otherwise, differences in these settings can cause dramatic color shifts that interfere with your output quality. For RGB working space settings, the most common working spaces are: 1) sRGB, 2) Adobe RGB, and 3) Apple RGB.

- Adobe RGB tends to be the most popular with photographers.
- sRGB is somewhat of a web standard.
- Apple RGB is often used for pre-press purposes.

For t-shirt printing, any of these three working spaces should be fine. The working gamut of a t-shirt printer is relatively small, so none of these working spaces will have a particular advantage over the others. In FastArtist and FastRIP, the default working space is equivalent to Adobe RGB.

NOTE: If your design applications are already set for Adobe RGB, then no further changes are required because this is the same default that FastArtist and FastRIP will use.

For whatever working space settings that you decide upon, make certain that they are consistent across the applications that you are using. By having consistent working spaces, this means that importing new elements into your design will be automatically provided with correct color management.

NOTE: For the Adobe Creative Suite products, note that the Adobe Bridge component is used to set the working spaces, which will then be enforced across the entire suite of products automatically.

Dealing with Working Space Mismatches

Once you have decided on all your working space settings, consider how you will resolve possible conflicts. For example, the Color Settings dialog (Fig. 20) has Profile Mismatches and Missing Profiles options for prompting when the working space of imported files are in conflict with your established workspace.

If your working space is Adobe RGB, then decide in advance about how to resolve an imported image that is tagged as either sRGB, Apple RGB, or some other working space. Usually, it is a good idea to convert import images to use your current working space, as this ensures you are consistently using the same working space.

Color Management in FastRIP

In FastRIP, you can confirm the working space settings as follows:

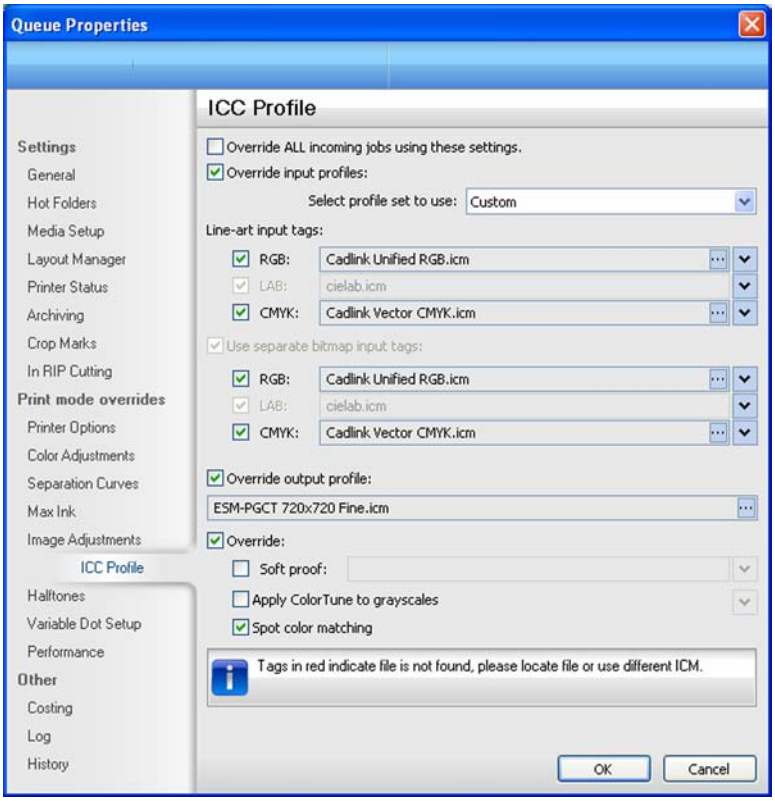
1. From the FastRIP **Queue** menu, choose **Properties** to open the **Queue Properties** dialog (Fig. 21).

2. Click the **ICC Profiles** tab.

3. The **Override Input Profiles** checkbox should already be checked (if not, check it).

4. For the "**Select profile set to use**" drop-list, choose **Custom**.

   The RGB and CMYK tags can now be set to match your PhotoShop settings.



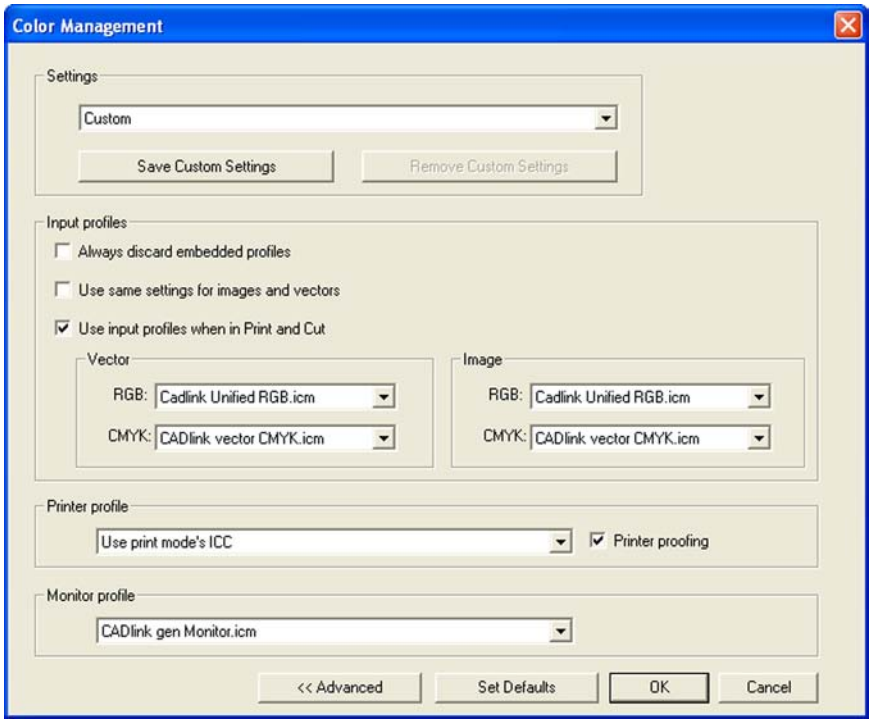
The **Queue Properties** dialog in FastRIP. The **ICC Profiles** tab is used to set the color working space.

NOTE: It is generally preferred to use the same settings for the Line Art and Bitmap tags.

Color Management in FastARTIST

In FastArtist, the working space can be set as follows:

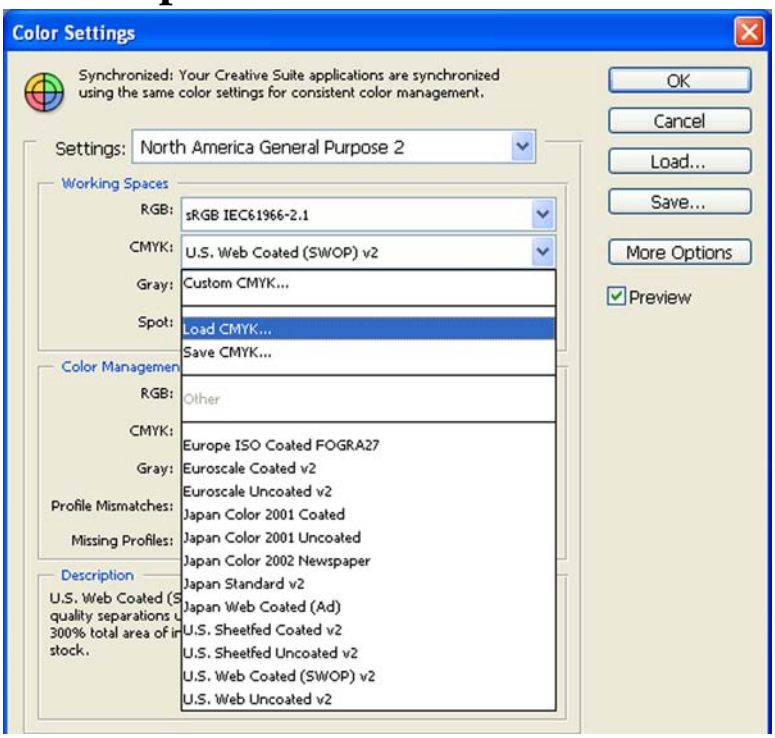
1. From the FastARTIST **Options** menu, choose **FastARTIST Setup** >> **Color Management**.
2. The **Color Management** dialog will open.
3. 3. From the **Settings** drop-list, choose **Custom**.
4. 4. The RGB and CMYK tags can now be set to match your PhotoShop settings.
5. 5. Click the **Save Custom Settings** button and name this configuration.
6. 6. Click the **Set Defaults** button.



The **Color Management** dialog is used to set the working space in FastArtist.

On-screen Proofing in Photoshop

Under the **View** menu, the **Proof Colors** toggle will preview your design on-screen as the job will appear when printed. However, prior to using this toggle, the **Color Settings** dialog must be configured with the printing profile that is being used with FastRIP.



From the **Color Settings** dialog, choose **Load CYMK** to choose the color profile of your printer, so as to proof your designs on-screen.

1. From the **Edit** menu, choose **Color Settings**.

2. The **Color Settings** dialog will open.

3. Within the **Working Spaces** section, click the **CMYK** drop-list and choose **Load CMYK** (Fig. 23).

4. Browse to the following location, where all of the FastRIP profiles are stored: C:\FastARTIST 2\FastRip\rip\system\clinks

5. Within this location is a sub-directory that is named for the model T-Jet that you are using. For example: C:\FastARTIST 2\FastRip\rip\system\clinks\TJETBLAZ

6. For some models like the T-Jet Blazer, there can be a subsequent sub-directory that is named for the color model that the profile was designed for.

7. Regardless, once you have found the correct sub-directory, choose the ICC profile that is used in your FastRIP print mode.

Once this ICC profile has been chosen in the Color Settings dialog, the View menu >> Proof Colors toggle will correctly preview your job on-screen . However, keep in mind that this setting is specific to the given printer, and you may want to reset the profile to its default for work with other devices.

NOTE: This feature works best when you have calibrated your monitor, such that you are using a custom input profile for your monitor.

The Gamut Warning Toggle

Once the printing profile has been configured in the **Color Settings** dialog, the **View** menu >> **Gamut Warning** toggle can be used to check whether colors in your design fall outside the gamut that the printer capable of reproducing.

Saving Photoshop Images for use with FastARTIST/FastRIP

In PhotoShop, the **File** menu >> **Print** command is not capable of retaining the underbase information that was prepared for the image. As such, it is necessary to save your image in either PSD, TIFF or PNG format, which can then be brought into FastRIP or FastArtist.

If you need more of an automated system of printing, then it is possible to configure a **Hot Folder** in FastRIP, such that saving your image is automatically detected and printed.

PSD FORMAT

- Saving in PSD format is encouraged because it provides the greatest compatibility when making further edits in PhotoShop.
- Before saving the image, make certain that there will be maximum compatibility between PSD and PSB files. This can be set via **Edit** menu >> **Preferences** >> **File Handling** >> **Maximize PSD and PSB File Compatibility** = Always.
- Alternatively, this can be set to **Ask**, which will prompt you each time that a PSD file is saved.
- With maximum compatibility with PSB, most PSD files should work without issue. However, if your image is composed of multiple layers, particularly with text and objects each with their own underbase, then it may be necessary to save the image as a single layer job. Use the **Layers** menu >> **Merge Layers** command to collapse such layers before saving.
- When saving, always tick the **ICC Profile** checkbox, such that an embedded profile is saved with the image.

TIFF FORMAT

- When saving in TIFF format, tick the Layers checkbox.
- When saving, always tick the ICC profile checkbox, such that an embedded profile is saved with the image.
- If available, then tick the Save Transparency checkbox.

PNG FORMAT

- The PNG format does not support the embedding of color profiles. As such, more care might be required to ensure that the correct profiles are used with the PNG file, especially if you are reusing a PNG file from a previous job.

JPEG FORMAT

- Saving as JPEG is not workable. Though the specification for JPEG files does allow for storing underbase information, PhotoShop does not currently support storing of underbase information in JPEG format.

Other PhotoShop Tools

PhotoShop provides several tools for preparing an underbase for your design. Technically, anything that gets you good results is suitable.

The Windows Underbase Method

Essentially, this technique requires you to specify where you don't want an underbase by setting all such pixels to pure white at RGB(255, 255, 255). However, the limitations of this method are:

- The print preview will not provide a reasonable indication of where the underbase will be applied.
- The underbase will generally be limited to harsh transitions, as opposed to allowing for gradients (i.e., a gradual tint underbase, such as for a red gradient that blends to the shirt color.

Color Range

Under the PhotoShop **Select** menu, the **Color Range** tool is used to select a specific hue (or range of hues). However, for black or near-black, the **KnockMeBlackOut** performs significantly better than **Color Range**.

- For other hues (including white), both **Color Range** and **KnockMeColorOut** will produce comparable results. However, the advantage of **KnockMeColorOut** is its ability to show results in three preview modes (Transparent, Show Underbase, and Shirt Color).

Magic Wand

In addition to the previous tools that we have mentioned, the **Magic Wand Tool** can often be useful for quickly selecting a specific hue or range of hues. Note that the **[Shift]** key can be used to add hues to the current selection.